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Marguerite Kinner

Red Fox

THE BOOK OF *THE FOX*

BY RICHARD CLAPHAM

AUTHOR OF
FOXES, FOXHOUNDS AND FOXHUNTING
FOXHUNTING ON THE LAKELAND FELLS, ETC.

ILLUSTRATED BY
LIONEL EDWARDS
MARGUERITE KIRMSE
AND FROM PHOTOGRAPHS



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FOREWORD

OF all our beasts of chase the fox is the most active, game, and beautiful. Long years ago he was a member of the vermin list with a price upon his head, but he gradually emerged from ignominy until now he is in the highest favour, and second to none in the sport that he affords.

Foxhunting to-day is as popular as ever it was, despite such drawbacks as wire, motor traffic, and glass-like roads, things of which our grandfathers knew nothing. Very large fields attend the meets of the fashionable packs, and amongst them are a great number of ladies. Youthful fox-hunters are well catered for by the Pony Clubs, the members of which receive instruction as regards their behaviour when out with hounds.

While the majority of people "hunt to ride" rather than "ride to hunt," there is no gainsaying the fact that an intelligent interest in hound work, plus a knowledge of foxes and their ways, adds greatly to the enjoyment of hunting. There are probably many hunting people who hardly ever see a fox during the season, while in summer they forget that such an animal exists.

Was it not the immortal Jorrocks who said, "the 'oss and the 'ound were made for each other and natur' threw in the fox as a connecting link. His perfect symmetry and my affection for him is a perfect paradox. In the summer I

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loves him with all the hardour of affection: not an 'air of his beautiful 'ead would I 'urt; the sight of him is more glorious than the Lord Mayor's show, but when the autumn comes then dash my vig how I loves to pursue him to destruction"?

In medieval times people took a pride in both their knowledge of hunting and of the habits of the various beasts of chase. To-day such knowledge is confined to the few rather than the many. The fox is a most interesting animal, either when acting as pilot to a pack of hounds, or going about his family affairs during the summer months. Our affection for him in the latter season is no whit lessened when we resume hunting. As Jorrocks said, "It ar'n't that I loves the fox less, but that I loves the 'ound more." Here we have the true spirit of foxhunting.

In the following chapters I have ventured to set down something about the fox and his ways, in the hope that it may prove attractive to the "young entry" of both sexes, and perhaps encourage them to take a personal interest in the "old customer" that provides them with so much good sport.

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CHAPTER I.

THE RED FOX

FEW, if any, animals are more pleasing to the eye than the red fox. Beautifully balanced and symmetrical, lithe and active, he is the poetry of motion as he slips away from covert with the smooth, oily gait that gets him over the ground at a wonderful pace. With his large, black-tipped ears, amber eyes with their elliptical pupils, and his thick, well furred brush, he makes a perfect picture.

Foxes vary in size and colour according to their surroundings. In England the hill foxes are generally larger and greyer than those in the Midlands. In the same way in America, the foxes of Kadiak Island and the wilder forest districts are bigger than their relatives in Virginia.

Roughly speaking, a red fox stands from fifteen to sixteen inches at the shoulder, and may weigh anything from, say, twelve and a half pounds up to twenty pounds and over. The average weight is about fifteen pounds for a dog fox, and thirteen and a half pounds for a vixen. Millais, in his *British Mammals*, gives a record of a hill fox of twenty-seven pounds. This is a big weight for a fox, yet it is possible that prior to the introduction of foreign blood certain hill foxes may have reached a weight of thirty pounds. The lightest fox I ever personally weighed tipped the scales at exactly twelve and a half pounds, while the smallest I have

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ever seen was a little vixen that was run to ground in a drain. I did not weigh her, but I feel sure she was not over eleven pounds, if as much.

The record weight for a fox killed by an English pack is twenty-three pounds. This fox was killed on Cross Fell by the Ullswater, one of the Fell packs which are hunted on foot amongst the mountains of Cumberland and Westmorland. The length of this fox was fifty-two inches from nose to end of brush. The latter was tipped with four inches of white. A fifteen-pound dog fox measured forty-four inches over all, and another dog fox, which was not weighed, taped fifty-five inches. An eighteen-and-a-half pound dog fox measured forty-eight and a half inches. In February, 1934, the Ullswater killed a Big dog fox that tipped the scales at nineteen pounds fourteen ounces. The difference in length is generally accounted for by the brush. The heaviest fox does not always carry the longest brush. The brush of a well grown nine-months-old cub may be longer than that of an old dog fox weighing seventeen pounds. The average length of a fox brush is from sixteen to eighteen inches. The brush may have a white tag or it may not. The white tip is seen in both dog foxes and vixens, and is plainly visible in the case of very young cubs with mouse-coloured coats.

The English Fell packs do not break up their foxes; thus it is possible to weigh and measure any unusually large specimen. Now and again a sweepstake may be got up over the weight of a fox. Most people overestimate the weight

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by pounds. To give one example. A Fell pack killed a fox, and after everyone had handed in their tickets the carcass was weighed. It pulled down the scale to twelve and a half pounds. The estimated weights on the tickets in the sweep varied from thirteen and a half to nineteen pounds. A fox that has recently had a big feed will naturally weigh more than another with an empty stomach.

The colour of a fox is reddish-yellow on the back, merging into a darker shade below. Belly, chest, and underside of legs light grey, shading into white. Pads, ear-tips, and a portion of the lower part of the legs, black. The brush is usually a darker shade than the rest of the coat. The underside of the brush often shows a distinct black line from root to tip. On the upper surface of the brush, and not far from the root, there is a scent-gland. Silvery white hairs are sometimes thickly distributed along the back, and the face may also appear whitish. White foxes occasionally crop up, and black ones have been reported. Sardinian foxes, and the variety known as *V. melanogaster*, have dark coloured under parts. In the *Field* of December 20th, 1930, there was a note concerning a light chestnut-coloured fox which was killed near Goathland on December 5th. The fox had chocolate points, the end of its muzzle being chocolate, and the hair on its pads soft like those of a cat.

The ears of a fox are noticeably large, and help to give him that "foxy" appearance.

A fox is hare-footed, not round-footed like a cat. There are four claws on each of the hindfeet, and five on each of

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the forefeet. The fifth consists of a dew-claw, which is an aid to a fox when surmounting obstacles, or descending steep and slippery places. A fox that has done much travelling, especially in rough and rocky country, has his claws well worn down, including the dew-claws; whereas one that has lived in a circumscribed area, or where the ground is soft, exhibits long and little worn claws.

A fox when walking has a stride of roughly sixteen inches. The tracks always register; that is, the hindfoot is placed on the imprint made by the forefoot on the same side. When galloping the hindfeet are thrown beyond the imprints of the forefeet. In soft ground the tracks show the marks of the claws, as well as the impressions of the four toes and the heel. On hard ground little but claw-scratches may show. On a frozen snow drift the claw-marks and scratches show up clearly. When descending or ascending a declivity, a fox spreads his toes more than when walking on level ground. The same applies when he is galloping. After Christmas, if there is snow on the ground, the tracks of dog fox and vixen will be found running close together. Here and there the two lines of footprints may merge into one, the dog having planted his feet exactly in the vixen's steps.

The fox carries his brush stiffly, generally pointing at an angle towards the ground. He does not, however, allow it to touch the ground. In pictures one often sees the brush of a fox trailing, or with fancy curves in it. In reality the stiff way in which a fox holds his brush is most noticeable. Even

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when dead beat a hunted fox will keep his brush off the ground. A fox does not wag his brush like a dog does its tail, but twitches it like a cat. When making a sharp turn at speed he swings his brush quickly to one side or the other, and when suddenly increasing his pace he may whirl it round and round like a propeller. Again, when descending a steep and slippery declivity, he will carry his brush straight over his back, using it as an aid to balance.

When he curls up to sleep his brush covers his nose. He does not always curl up, however, but will in fine weather lie stretched out full length in the sun. In most hunting countries a bob-tailed fox sooner or later appears. Such a fox has, I imagine, met with some accident, such as being snapped at by a hound when getting to ground, or being attacked by a terrier underground. The brush of a freshly killed fox easily peels off the bone if it is cut round at the root, and a hound or terrier can easily bite through the bone. I have never heard of a fox cub being born like a Manx kitten, minus a brush.

A fox in his prime has beautiful teeth, and he knows how to use them in both attack and defence. During the courting season the dog foxes fight savagely, and though few, if any, such encounters appear to end fatally they are pretty hot while they last. Underground, too, a fox can often give a terrier a bad mauling, if he happens to hold the upper berth.

Although the fox is a member of the family *Canidæ*, there is yet no really authentic case on record of a cross

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between dog and fox. The wolf, jackal, and dog will interbreed, and it is said that certain of the hybrids are fertile. In its liveness and activity, as well as in the way it twitches its brush, the fox is very cat-like. When playing, or fighting over food, fox cubs hiss and growl more like cats than dogs.

Masters of Hounds in England do not look with any great favour upon people who wear red fox furs. There is always a demand for such furs, and the prices offered by dealers are quite sufficient to encourage the traffic in fox skins. The latter may come from foxes in a non-hunting country or they may not. In Cumberland and Westmorland many of the wives and daughters of hunting farmers, shepherds and working men wear fox furs which have been quite legitimately killed by the various Fell packs. As the hounds belonging to these packs do not break up their foxes, there is always the chance of getting a good skin after a kill. There are of course districts in Britain which harbour foxes that are never hunted. In these non-hunting countries, such as the Highlands of Scotland, the foxes are treated as vermin, to be shot, trapped, or worried underground by terriers. Sometimes they are taken alive, and sold to a hunting country that requires fresh blood to augment the existing stock.

As already mentioned, a fox has large ears for his size. While he is quick of hearing, I think he chiefly depends on his nose to warn him of danger. His eyesight, like that of most wild animals, is quick to pick up a moving object, but if the wind is right, and you sit or stand still, a fox will pass

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very near you without showing the least awareness of your presence.

Although a fox does not trail his brush on the ground, you may, if you follow his tracks in deep, soft snow, find marks where his brush has touched it.

It is difficult to say how long a wild fox will live, provided he has the luck to escape hounds or other dangers. Possibly as long as a dog. Occasionally very old foxes come to hand, whose grizzled appearance and worn down teeth, or lack of same, testify to a ripe age. No doubt these old customers make up in cunning what they lack in vigour.

Since very early days the fox has shown marked ability in avoiding extermination, probably owing to the fact that he is extremely adaptable to changes of food, climate, and surroundings. Granted the above, it should be remembered, however, that in both England as well as other countries, a considerable measure of protection is afforded him in certain districts. In England he owes his freedom to hunting, and this applies also to certain districts in America. Again, those foxes which are valued for their furs dwell in uninhabited regions, where trappers and hunters are comparatively few, and cannot do more than take a percentage of the foxes which roam through the forests and barrens. Some no doubt fall victims to predaceous creatures like wolves and cougars, yet they are in no danger of extermination from such enemies.

CHAPTER II.

FOX CUBS

Fox cubs are usually laid down towards the latter part of March. Roughly speaking, the number of cubs to a litter is four. Much larger litters are, however, on record. A litter of twelve cubs was once found in Wiltshire, and the late Lord Willoughby de Broke once saw a litter of eleven in a marl pit near Stratford on Avon. In March, 1934, a litter of eight cubs was found on Whitbarrow, Westmorland. One cub out of a litter taken in the latter county in April, 1920, had all four of its pads pure white.

Fox cubs at birth are blind, and covered with mouse-coloured fur. If any of the cubs in a litter have a white tag to their immature brushes, it will be plainly visible even at that tender age. It is some time before the cubs begin to open their eyes, and in my experience with hand-reared cubs their eyes may not be fully open until they are nearly three weeks old. Both eyes do not invariably begin to open at once, development being slow, as it is in the case of polecats, stoats, and ferrets. This may be a provision of nature to prevent the cubs from crawling out of the earth, and thus exposing themselves to danger.

At first the eyes of a cub are blue-grey; this colour gradually changing until it assumes the amber shade of the

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eyes of the adult fox. The amber eye has a veined appearance, and in a bright light the pupil is elliptical. At night the pupil opens to its full extent. Whilst the eyes are changing colour the coat does the same. The brown shade first appears about the face. At first the nose is flesh-coloured, but later turns black. At about five weeks a cub can make some use of its legs. Once it can walk it gains strength rapidly.

From time to time early litters of cubs are reported. Some of the earliest have been recorded before Christmas, and others in January and February. Half-grown cubs have been seen in January, which means that they had been born in September. This raises the question, does a vixen ever breed twice in the twelve months? Is it possible that one which had lost an early litter would mate again and produce a second lot of cubs?

The vixen generally, but not invariably, lays down her cubs in an earth. She may enlarge a rabbit burrow, or make use of a portion of a badger earth. In some hunting countries stub-bred foxes are not uncommon. Hill foxes usually resort to rocky cairns for cubbing. In the English Lake District, where the Fell packs hunt on the mountains, the foxes nearly always have their cubs amongst the rocks. Even when the latter afford plenty of secure underground retreats, a vixen will sometimes lay down her cubs practically on top of the ground. In April of this season (1936) I was out with a Fell pack when hounds marked amongst some stones, and before the huntsman or any of the field

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could get there, they scratched out four cubs which had been laid down quite close to the surface. I imagine that in a case of this kind, the vixen is a young one bringing her first litter into the world. In open country like the Lakeland fells, the position of a litter that has been laid down in an earth hole or enlarged rabbit hole is often given away to experienced eyes by the light-coloured earth which when dry shows up very distinctly against the background of green grass, and can be seen from a considerable distance. As against the above-mentioned carelessness on the part of a vixen in hiding her cubs securely, there is an instance on record of a vixen removing her litter from a hole in the side of a river bank an hour or two before the river came down in heavy flood. The weather was fine at the time, nor did it rain locally when the water rose. Was this a case of intuition on the part of the fox, or was it mere chance that she shifted her family in time to save their lives, for they would assuredly have been drowned had they not been moved?

I remember a litter that was laid down in the face of a crag. The vixen had chosen a narrow perpendicular crevice, the ascent to which was by no means easy. That the cubs had been well fed was evident by the remains of pheasants' tail feathers, bones, etc. These birds had been caught and killed in the dale below, and had been carried by the vixen for a considerable distance. The dog fox, too, probably did his share in the feeding.

As the cubs grow, the vixen will move them to some

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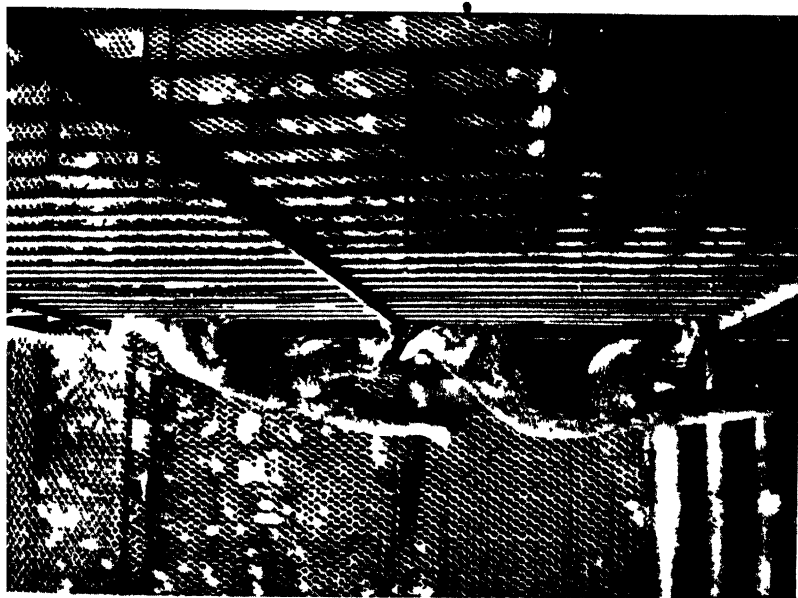
larger and more secure retreat. Foxes are dirty in their habits, and a small earth like a rabbit hole soon becomes an unfit place to hold a growing family. Should the vixen think that the breeding-earth has been discovered, she will at once remove the litter elsewhere.

Badgers and foxes sometimes occupy the same earth. Unlike a family of foxes, a badger is clean in his habits. Just why he puts up with the vulpine visitors it is difficult to say. "Brock" could, if he liked, destroy both the cubs and their mother, but as a rule he appears to get along with them. Now and then, however, accidents happen and the badger loses his temper. The result is then a slain fox or a murdered litter.

By the time the cubs are old enough to play about outside the earth, their education begins. Like all young creatures they are fond of play, and when they tumble about and fight amongst themselves, they are hardening their muscles and getting all their faculties in tune. The cubs quickly realize that the earth is a safe refuge in time of danger, and at a warning bark from the vixen, they disappear below ground like lightning.

Probably their first attempts at killing take place when the vixen brings home something with life still in it. Anything that moves, from a wind-blown leaf to a beetle, will attract a cub. Being one of the chief items of food on a fox's menu, probably the first creature that a cub kills for itself is a beetle, or a field vole amongst the grass.

By degrees the cubs grow strong enough to enlarge their



FOX CUTS CLIMBING KENNETH WATKINS



FOX CUTS WITH THE FOX CUT RY THE

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sphere of action, and it is then pretty safe to say that the vixen begins to teach them something about real hunting. I do not think that vixen and cubs all go off together on a grand foray, and the reason I do not think so is because of evidence to the contrary given me by a friend. The latter, an experienced hunting man, was one evening watching a litter of cubs amongst the rocks on a hillside. The vixen appeared at a little distance, gave a low bark, and one of the cubs went to her. With this cub she moved off, the remainder of the litter staying at the earth. The watcher did not actually see what happened later, but it looked as if the vixen was taking the cub to hunt, and to teach it its way about.

As adult foxes do not hunt in pack formation like wolves, it seems probable that a vixen teaches her cubs singly.

Fox cubs bark quite a lot, and when doing so they do not point their noses skywards like a dog howling at the moon, but hold their heads down. Both when playing and struggling for a share of food, they often fight. These encounters are accompanied by hissing and growling, a curious medley of cat and dog noises. In every litter there is usually a precocious cub, as well as a less assertive one—the former often a dog fox, and the latter a little vixen.

Cubs are found together in late August and September, when cub hunting usually begins. A percentage of them are then killed, and the remainder get split up. At any rate, by October cubs are capable of living on their own. By that time, when they are seven or eight months old, they have

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learned their way about within a limited area, and can easily kill for themselves. The cub which manages to live through his first hunting season, will by the end of it have considerably increased his knowledge of the country. Every day or night he gains further experience of the world, and learns how to take care of himself. If he is a dog fox he will find that he cannot have things his own way, because there are others which claim certain areas of country as their own. Every dog fox has his particular beat, and he will brook no trespassers upon it. Thus, by the time the cub is about two years old, he also finds it desirable to acquire a beat. If he is a determined sort and a fighter, he may perhaps dispute the right of one of his neighbours to certain territory. Then if "might proves right" he is either a winner or gets driven off to establish himself elsewhere.

Having acquired a beat of his own, he soon learns his way about within his territory, beyond the boundary of which the country is strange to him. A fox learns the lay of the land in detail, for from a height of fifteen inches he cannot get a panoramic view of the country like a man. A very small obstruction may form a fox's horizon, such as a hedge or an undulation in the ground. Thus it is by remembering in detail the objects that he passes that he is able to cross the country at speed when hounds are on his line.

Cubs when first hunted will, if they escape hounds, soon return to their home covert. One day when a staghound pack came to a fox covert on the top of a hill to draw for an outlying deer, I saw five fox cubs appear in the open.

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Hounds found and hunted their stag into the valley below, and within ten minutes I viewed three of the cubs back into the wood, where doubtless the other two soon joined them. An old fox will on occasion do the same thing if he can shake off pursuit.

The cub's mind is limited by experience. We humans can look forward, put two and two together, and if necessary act on the spur of the moment. It is hardly reasonable to suppose that the fox is capable of doing this. At any rate his behaviour when hunted does not point in that direction. It is pretty safe to say that the thoughts of both a cub and an old fox are concrete, and the memory of each is a mass of facts gained by experience.

Many or in fact most of the moves a hunted fox makes are, I think, influenced by the tactics he has employed at different times when he himself was the hunter. He may find the hollow tree where another fox lies, or climb the ivy-covered wall in search of roosting birds. In a stone wall country when the snow is drifted deep, he will walk along the wall top which is blown clear by the wind, and thus find good going. Perhaps he visits the sheepfold or the manured fields in search of beetles, or walks up the road where the rabbits cross from the woods to their feeding ground. As such journeys are part of his regular routine, it is not surprising that he takes the same direction when hounds are behind him.

It is still safer to say that whatever he does, should he escape by that means once, he will act on the same plan

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again and again until something leads to his undoing. Every season certain foxes afford examples of this. A fox is found, gives a fast straight run, and is lost. The next time the covert is drawn the performance is repeated, the fox running the same line, field for field.

As a killer of rats, the fox is an expert. The late John Gaunt, a Derbyshire rat-catcher, owned two tame foxes which he worked with his terriers and ferrets, and he claimed that they were excellent substitutes for dogs. In some hill districts field voles are exceedingly plentiful, and foxes kill large numbers of them. Many small ground-building birds, such as meadow pipits, are killed by foxes. Wild duck, although wary birds, often meet the same fate. A fox has been known to enter the water and drift downstream towards a flock of ducks and secure a victim before the birds were aware of his presence. Frogs make a strong appeal to a fox, but Reynard does not apparently like frog spawn. At any rate I have found spawn discarded on sheep tracks where foxes had been eating frogs.

A fox will eat various wild fruits such as blackberries. Probably the food most beloved of the fox is beetles. I have examined hundreds of foxes' billets, and a very large number of them consisted of practically nothing but the wing-cases and other hard portions of beetles. On the hills a species of black beetle is extraordinarily plentiful, and a fox can soon make a meal of them.

A fox will pick mussels out of fresh water, and may possibly secure crayfish as well. It will scoop fish out of

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shallow pools, and also eat stranded fish. Foxes inhabiting the sea-cliffs prowl about the shore, and no doubt secure both fish and various crustaceans. In the north of England the hill foxes kill lambs in spring. I feel pretty sure that a fox kills the lambs he takes to feed the cubs with, and does not care much for those already dead. At any rate, I have known lambs that had been tossed on to walls and otherwise temporarily thrown aside by the shepherds, to remain untouched, whilst foxes still killed and carried off lambs from the nearby flock. A fox will eat dead sheep, but I think both vixen and dog fox like to take warm lamb to their cubs. Although a fox kills frogs, he leaves toads severely alone, because the skin of the toad exudes an acid secretion. Another creature killed and eaten by foxes is the hedgehog. After a fox has slain a hedgehog and eaten it, it leaves the prickly skin turned neatly inside out.

When a fox hunts for grouse, he quarters the ground like a pointer or setter until he gets wind of the birds, and then stalks them. I have on several occasions when grouse shooting, come upon a fox thus engaged. Blackgame, which are fond of resorting to the rush beds for jugging purposes, frequently fall victims to the fox. Foxes also kill domestic fowls, turkeys, ducks, and geese. A fox, when carrying a large bird, does not sling it over his back, but holds it as a dog would. Foxes hunt continually in the vicinity of water, and they are good swimmers.

One finds a variety of remains in and about a fox earth. At the earth of a hill fox I saw the remains of several

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rabbits, portions of two leverets, feathers and bones of grouse, a very young lamb, and the untouched body of a short-eared owl. Owl had not apparently suited the cubs' taste, otherwise they would soon have pulled it to pieces. At other earths I have found the remains of pheasants and woodcock, with occasional bones and feathers of blackgame. When carrying food to the cubs, a fox often adopts the labour-saving device of wrapping the items of food in grass, or tucking them under a bird's wings. I have found meadow pipits and field voles done up in a grass bundle lying close to an earth. On one occasion a woodcock was found with two young rabbits tucked under its wing. Birds sitting on eggs are supposed to emit little or no scent, but a fox can easily find and kill them, frequently doing so in the case of partridges.

When a fox is on hunting bent, his nose is his chief asset. He has quick ears, and is not slow to spot a moving object, but his sense of smell is marvellously keen. By the time a fox is adult his nose can differentiate between, and properly place, all the scents which permeate the air, including those of the creatures in fur and feather. Thus at night he probably gets a perfect "scent picture" of his surroundings. Although scent leads a fox direct to his prospective victim, I think he sees the object of pursuit before he springs upon it. He may dart at moving stems of grass knowing that a vole is amongst them, but I hardly think he would make a blind spring if his nose told him that, say, a blackcock which he could not actually see was in some

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rushes. Voles he can catch without any trouble, as there are so many of them; but game birds require time and labour to circumvent, so it seems reasonable that he should try to make a sure job of a stalk. Young rabbits in the nest he gets by digging them out, but young hares he finds in a nest above ground. He often uses the wall tops as runways, offering a vantage point from which to spring down on to rabbits and hares which use the meuses through the walls.

Ground-roosting birds like grouse often fall victims to a fox. I have found traces in the snow where a fox had stalked and sprung upon a jugging grouse. American foxes often dig out ruffed grouse from the snow drifts in which the birds bury themselves for the night.

I once had proof that a fox's nose discerns danger better than his eyes or ears. I was sitting one day on the hillside below a crag and opened a packet of lunch, the paper covering of which made quite a crackle. I had come quietly to the spot before I sat down. Whilst eating my sandwiches I spotted a fox lying on a ledge in the crag face. He was staring intently in my direction. I examined him through field glasses, and still he lay quiet. Then there came a puff of wind, and at once the fox sprang up and made off, having got my scent.

On another occasion I saw a fox lying full length in the sun on the slope below me. I could note through my glasses that his eyes were shut. I went a few yards downhill to secure a background, then rolled a stone in his direction. It was a small stone, and nothing happened, so I followed it

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with a larger one. The fox promptly raised his head and stared in my direction. After a steady scrutiny he dropped it again, but kept his eyes open, I then threw another stone and got to my feet. Instantly the fox made off. As long as I kept still he failed to see or scent me, but directly I moved and was silhouetted his eyes warned him of danger, and two jumps took him round some rocks and out of my sight.

Sometimes two foxes may hunt in company, but as a rule I think the average fox goes about the business of food-getting single-handed. Charles St. John, in his *Sportsman and Naturalist's Tour in Sutherland*, when speaking of the sand-hills of Culbin says, with reference to the foxes which were plentiful there: "From their tracks it is evident that two foxes constantly hunt together; and they take different sides of every hillock." A fox may sleep pretty soundly if he thinks he is safe, and it may take quite a loud noise to wake him.

It is possible that certain individual foxes may be deaf. At any rate on one occasion a cub behaved in such a way as to give me that impression. I was out shooting, and fired at a blackcock which flew out of some rocky ground above me. I gave the bird both barrels before it dropped, and as I turned to go downhill I saw a fox cub curled up on the top of a flat boulder below me. I knew there was a litter in the vicinity. The reports of the gun echoed loudly amongst the rocks, yet apparently the cub never heard them. I rolled a big stone down the slope, and it crashed into the boulder. The cub sprang up, and disappeared in the bracken which

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grew profusely nearby. It looked as if this cub were deaf, or else sleeping extraordinarily soundly.

From Christmas onwards, when the lure of sex stirs in him, the dog fox goes in search of a vixen. He may not be the only suitor, and if he meets a rival it generally means a battle royal. Probably the winner goes off with the lady. I have found places in the snow all trampled down, with specks of blood, and patches of fur, where two dog foxes had fought.

In the *Estate Magazine* of April, 1931, there was a note on the mating of foxes. A gentleman's gardener was exercising his master's two dogs early one morning in February on the bank of the River Stour. On the opposite side of the river, which is about twenty-five yards wide, where there is no cover of any sort, he saw two foxes in the act of mating. The vixen was crying in a peculiar way. The foxes took no notice of him or the dogs, and after mating went off together over the open meadow to a big wood about half a mile away.

I think the average dog fox sticks to the vixen of his choice, and helps to feed the cubs. The fur-farming industry has proved that in the case of black foxes this is undoubtedly so, and that the properly paired couples are faithful to each other; hence the price of guaranteed breeding pairs is high. He will continue the feeding, if the cubs are of an age to eat flesh food, should the vixen chance to lose her life. If, however, a particular vixen happens to come in season much earlier than usual, he may serve her,

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and then when other vixens come on at the usual date one of them may draw him from his first love. A vixen and cubs are better off in late March and early April than they would be much earlier, because the food supply is then plentiful, in the shape of young rabbits, etc. A very early litter of cubs may grow up as weak, stunted things, or they may die.

After the cubs are old enough to go about on their own, it is possible that the dog fox and vixen may sometimes hunt in company with each other, but of this one has no actual proof. They probably haunt their own particular beat, however. An unmated dog fox may have to travel a long way in search of a vixen. This probably happens in the case of a two-year-old fox who is establishing himself in the world. I don't imagine any dog foxes are great respecters of beats during the mating season. It is a case of "might is right, and the devil take the hindmost." A dog fox that has wandered far from his home ground to visit a vixen, will, if found by hounds, set his mask for his own territory, and go straight back there. If a fox has once been to a place, he can find his way there again. If, however, hounds force him beyond country known to him, he is lost. But more of this in the chapter on "The Hunted Fox."

I think the individual beats of foxes vary in size, according to the stock of foxes in the country. In the case of grouse, old cocks claim more ground than young ones, and thus they cause the breeding pairs to spread out. In a thinly foxed country, dogs may have to travel a long way to find



HITTING A FOX WHEN UNARMED
JULY 5, 1911



SHOT AND PICKED CLEAN BY FOCUS RAVINS
AND BUZZARDS

FOX CUBS

vixens, but when there is a big stock of foxes, individuals are content with smaller beats. The fewer the foxes the less opposition there is, and vice versa.

While full grown sheep have before now been killed by foxes, the latter do much more damage amongst lambs. When shepherds on the hills are out looking for sheep which have been snowed up in the drifts, fox tracks often lead them to the spots where the buried sheep are. Foxes will scratch down to sheep so buried, but if the sheep are still alive they usually do not touch them. I have known a sheep to be buried under snow for three weeks, and then recover. Occasionally a fox or foxes will pull some wool off a buried sheep; I knew of such a case, the fox tracks proving that Reynard was the culprit. Sheep will pull their own wool off when buried for long in snow. On one occasion a sheep was buried up to the neck in snow, and had been there some time. The shepherd, on the day he found it, saw two foxes near it, but they had not actually marked it.

Although the fox usually stalks his quarry, instances are on record where a fox has performed various antics in order to attract the attention of his prospective victims.

Foxes, like other animals, are often troubled with fleas. Most people have heard, and taken *cum grano salis*, the yarn of the fox which waded into the water and gradually immersed his body until all his tormentors collected on the tip of his brush, when he gave the latter a shake and consigned the fleas to a watery grave. This story in a rather

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different form, raised some correspondence in the *Field* in 1928, and several letters concerning it appeared in that paper. Instead of using the tip of his brush on which to collect the fleas, the story has it that the fox picked up a bunch of wool in his mouth, and then immersed himself until the fleas were all on the wool. He then let go of the latter, and in the argot of the late war, de-loused himself. A fox is supposed to be clever, but I make no comment on the above, and will leave the reader to decide for himself or herself concerning the possible truth of the yarn.

Certain animals like the opossum are given to shamming death, and on occasion a fox may do likewise. There are a number of records of such occurrences. In one instance a fox shammed dead, and several magpies dropped down to have a look at the supposed corpse. The latter was very much alive, however, and killed one of the birds. In another case a fox was rolled over by greyhounds, and lay apparently dead. Later, however, it got up and made off. On two or three occasions I have seen a fox that had apparently been killed by terriers underground, come to life again after it had been unearthed and laid down above ground. In one instance with a Fell pack, the fox that had shammed dead made such good use of his legs that he finally got to ground in a place from which it was impossible to evict him.

In an ordinary way a fox is well able to look after himself, and seldom suffers from accidents. Occasionally he may be caught in a trap and get free with the loss of a foot,

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or he may get caught in a rabbit snare, and twist the wire till it breaks, cutting his leg to the bone, and leaving a ring of wire in the wound. The stump after the loss of a foot soon heals, but the wire is apt to cause complications, the leg swelling tremendously. In time of sudden flood foxes are sometimes drowned in drains. A curious accident that befell a fox was related to me by a friend. He was out shooting, and when walking through a wood, he discovered the carcass of a fox wedged by the neck between two close-growing saplings. What had actually happened one can only conjecture. Possibly the fox was chasing something, and either thought he could pass *between the saplings* or got his head between them accidentally. Whatever the truth of the matter, he had been unable either to withdraw his head or squeeze the rest of his body through.

Like all other animals, foxes are afflicted with parasites of sorts. The worst that can happen to a fox, however, is to become mangy. Mange is a horrible complaint, and a mangy fox, nearly hairless, is a horrible sight. Hand-reared foxes kept in dirty surroundings often contract mange, and when turned down contaminate the wild stock, as well as the earths. Drastic measures are required to stamp out an epidemic of this complaint. Foxes that have been shot at and wounded may also develop mange.

CHAPTER III.

HABITS OF THE FOX

WHILE the fox is usually found abroad between the hours of dusk and dawn, he may, like the domestic cat, wander about at any time of day, especially in those localities where disturbance is infrequent. His amber eyes, with their elliptical pupils, serve him well in a bright light, and at night, when the pupils open to their full extent, they are equally efficient. Except in the breeding season, he leads a more or less solitary existence, and where not subject to interference he spends the greater portion of his time above ground, provided the weather is not too inclement.

It takes very little to shelter a fox, but if there is a regular downpour a rocky district affords more above-ground protection than a covert. Beneath a projecting boulder or over-hanging rock a fox can lie quite dry, whereas in a wood there is drip from the trees as well as the actual rain. Thus, in really wet weather, a fox is more apt to lie underground in covert than in open hill country where there are plenty of rocks and crags. As to actual lying places, a fox may be found almost anywhere. A sheltered spot in covert that catches the sun may attract him, or he may choose a dry place amongst an area of swamp. He finds the latter a secure retreat, because he gets plenty of

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warning before danger can reach him. A hollow tree or the hollow in the top of a pollard willow may serve him for a bed, or again he may lie quite high up amongst the branches of a fir tree. In moorland country he will lie far out amongst the heather, while in the mountains he makes his kennel amidst the rocks, or on some heather-covered ledge in the face of a crag. A dry drain or a disused quarry afford him underground protection, the same applying to a natural or artificial earth in or out of covert.

Speaking of foxes and wet weather, a season or two ago my wife and I were on our way to nick in with hounds on the fell, when, just as we reached an old disused quarry, we saw a fox standing on top of a stone wall. It was raining heavily at the time, but the fox made no attempt to find shelter. After walking about on the wall top he jumped down and sat under the wall. Eventually he saw us and disappeared round the shoulder of the hill. As we went on our way the downpour grew heavier, the thunder rolled, and flashes of lightning split the sky. Amidst this tumult we heard the cry of hounds, and at long last the pack marked their fox to ground amongst the rocks, from which he was eventually evicted. The storm quickly cleared, and when like drowned rats we made our way towards home, the water lay ankle deep in places, and the fell becks were in flood. However wet the night has been on the fells, it is seldom that a fox cannot be found next morning lying somewhere above ground. As already mentioned, overhanging rocks and projecting boulders afford ample pro-

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tection for a fox, and there is no uncomfortable drip from trees as is the case in covert.

In the Fell country of Lakeland, I know of several instances of foxes lying quite high up in fir trees. A fox is extraordinarily active, and can climb nearly as well as a cat, although his claws do not give him the same purchase as those of a feline.

A fox has his regular runways and passes, both in big woodlands and in the open hills. In those districts of America where foxes are hunted by a slow hound to concealed guns, the shooters know the various crossing places which the foxes use. In Canada I have been present at many such hunts, the fox usually giving an easy chance as he idles ahead of his slow, deep-mouthed pursuer.

At intervals along the sheep-tracks or other routes he follows, the fox will at certain spots, "drop his card." The place may be a tuft of grass, and if you chance upon it in the snow you may see the footprints of another fox or foxes. As mentioned in a previous chapter, an adult dog fox has his own particular stretch of territory. Both animals and birds have these beats of which they are jealous, and from which they will endeavour to drive intruders. During the love-making season, I don't think that dog foxes are very particular about crossing one another's boundaries if impelled by the lure of a vixen. Under normal conditions they probably respect their neighbour's line of demarkation.

The needs of a fox's life are food, sleep, and sexual intercourse. In order to obtain food a fox has to hunt for it,

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and this hunting gives him exercise, and helps to keep him in good condition.

Most of his food consists of creatures in fur and feathers which he kills, but he does not object to feeding off carcasses that have been slain by human agency, or that have died through stress of weather. A fox will follow a badly wounded deer until it dies. After a shoot, either in covert or on the marsh, a fox will search for pheasants or wildfowl that have been wounded or killed, but not gathered. Both dead and live fish appeal to him, as well as crustaceans. A fox will bury food, generally leaving some portion of it sticking out of the ground. It may return to unearth such treasure, in fact frequently does so, and in this respect is more intelligent than the average dog, which buries stuff and promptly forgets all about it.

The menu of a fox is an exceedingly varied one, and consists of hares, rabbits, young roe deer, rats, mice, moles, game birds, small birds, wildfowl, frogs, fresh-water mussels, insects, and fruit. A fox has been known to take sucking pigs, or at any rate attempt to take them.

A fox will kill cats, as well as stoats and weasels. He will also kill pine-martens if he can catch them in open country. The fells of the English Lake District used to harbour at one time far more martens than foxes, but since the foxes have greatly increased, the martens are very rare. A fox will roll on the carcass of a dead cat. Such a carcass has been found at a fox earth before now. Whether foxes ever eat cats, I do not know.

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It is safe to say that a fox kills rabbits and hares chiefly by stealth. After following hundreds of fox-tracks in snow, I have found that the evidence points that way. A fox is extremely fast for a short distance, and can doubtless easily run down a rabbit if so inclined. I have no doubt it could do the same with a hare, or at any rate a leveret. A friend of mine once saw a fox in full pursuit of a moorland hare, but failed to view the finish of the chase. The late Charles St. John, in *Wild Sports in the Highlands*, describes how a fox saw some hares feeding in a field, and lay down beside one of the gaps in the fence through which the hares went back and forth. The fox scraped a hollow, throwing up the sand as a kind of screen, and then remained motionless until two hares came through the gap, when it sprang up and killed one of them.

CHAPTER IV.

THE HUNTED FOX

WITHIN the boundary of his own particular beat a fox is perfectly at home. Should he cross the boundary in search of a vixen, or to widen his territory, he can find his way back by the same route. His height allows him a restricted view of the land, thus his landmarks are not, say, a far distant church or hill such as would give a man the right direction, but small things like a hedge, a gateway, a sheep track, or a ditch. He learns his way about in detail, and remembers every stick and stone that he passes.

Let a fox be forced well beyond the boundary of his beat, and he is quite at sea. With hounds perhaps close behind him he dare not turn back, and so he has to run blind. Plenty of instances could be given of hunted foxes running past places in which they could have got to ground when in strange country. If the fox had the stature and mind of a man, he might see a wood a long way off, and at once think to himself that there was a possibility of its affording him refuge in the shape of an earth or some other retreat. A fox in most instances, however, fails to get to ground in strange country, and is usually killed in the open, unless he runs hounds out of scent. It is pretty safe to say that a possibility is more than the mind of a fox can compass. He can act

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quickly enough on the spur of the moment, as witness the agile way in which he often escapes hounds when practically surrounded, but he quite fails to act with the same rapidity when the lay of the land affords a possible source of safety. A hunted fox often skirts a covert, not I think because he feels too heated to enter it, but because his hearing is restricted amongst the trees and undergrowth.

It has been said that a fox runs fast or slow according to his knowledge of the state of the scent at the time. To an animal with a keen nose like a fox, scent is probably good enough every day or night to serve his purpose when hunting. I hardly think, therefore, that he connects scent with the hounds that chase him. Far more likely is it that he hears the cry, near or distant, waxing or waning, as the case may be, and by it registers the pressure of the pursuit.

A hunted fox never travels a yard further or faster than he need. The humanitarians love to harrow their disciples' feelings with stories of the hunted fox fleeing at top speed for his life, and in terror every yard of the way. Such a yarn is absurd. Anybody who has done much hunting, and been in a position to view hunted foxes, has had plenty of evidence that, except on a first rate scenting day when hounds can scream along, a fox exhibits little concern. On the hills of the north of England, as well as in the Canadian woods, I have often watched a fox loafing along in front of hounds. Walking, and stopping to look back and listen on a bad or moderate scenting day, he exhibits not the least sign of anxiety or fear. Should hounds, however, get away hard at

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his brush, when scent is good, then the fox is forced to put his best leg foremost. Under such conditions, unless he gets to ground or shifts the burden of pursuit on to another fox, his doom is sealed and he will be rolled over in twenty minutes or half an hour. We are not concerned here with the cruelty or otherwise of field sport, but I imagine that if foxes could talk, and a consensus of their opinions was taken, they would agree that it is better that a percentage of them should be killed by hounds in order that the rest may live, than that the whole tribe should be destroyed by poison, gun, or trap in the interest of so-called humanitarianism.

What we describe as a "straight necked 'un," is the fox that goes away from covert with a point in his mind's eye, and tries to get there as directly as possible. From a vulpine point of view, such procedure is not exactly calculated to save the life of a fox. It is the twisting, short-running fox that is most likely to outwit his pursuers.

In a previous chapter we have seen that a fox on his hunting expeditions may make use of roads, cross freshly manured fields, or go through sheepfolds. When hunted he may do the same. It has been said that when a fox runs a road he knows that the latter carries very little scent, and that the freshly manured field and the sheepfold obliterate his scent as he passes. Granted that these things may happen, I think it is extremely doubtful if a fox knows that by crossing such places he is leaving a minimum of scent behind him. On his hunting expeditions a fox is out for

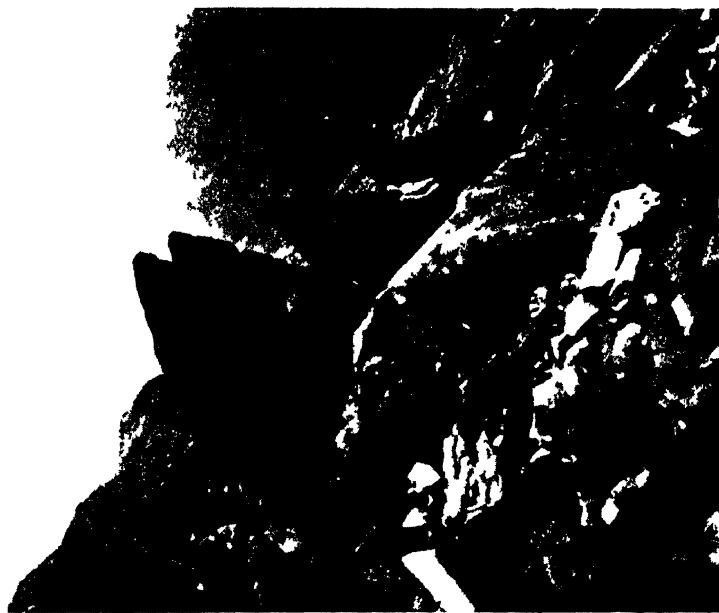
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food, and beetles are to be procured where there is manure. Rabbits likewise cross the roads at night, as any motorist knows, and naturally the fox visits such places. He has his own routes within his beat, and he uses these routes when he is hunted as he does when he himself is the hunter. A fox on the prowl may go through cattle or sheep, and he will do the same when hounds are on his line. As already stated, once a fox eludes hounds by taking a certain line, he will do so again and again until his luck fails, and he is caught. If a hunted fox jumps into a field where sheep are folded I do not think he does so because he knows that the smell of the sheep obliterates his own scent, but simply because he has been there before, and the line happens to be one of his much used routes.

It is impossible to dogmatize about the behaviour of an animal, and we can only conjecture as to how the mind of a creature like the fox works, so I will leave the reader to come to his own decision on the subject.

When a fox breaks covert and goes away, he has some point in view, probably an earth in a distant wood. He goes there fast or slow, according to the nature of the pursuit. If hounds press him, he shoves along, and probably finds when he reaches the earth that it is stopped. There is nothing for it then but to go on, perhaps to try other earths that he knows, or be driven into strange country.

Should he be able to check hounds or perhaps run them out of scent altogether, he is quite likely to double back and return to the covert where he was found. If he gets to



FARTH IN F N LISH I AKE D SRICT



ROCKY F N LISH

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ground, he may be left, or an attempt may be made to bolt him. A fox that goes to ground soon may bolt quickly, just as one that is lying underground will do when a terrier is introduced. If, however, the fox has come some distance and is tired, all the best efforts of the terrier may fail to shift him. A big dog fox is no mean adversary for a terrier if he elects to give battle, although the dog will prove the winner. Small terriers have been killed by foxes before now, but the average good working terrier is more than a match for the biggest fox. In a hill country where the earths consist of masses of piled up boulders, it may be impossible to bolt a fox. Some of these places are practically impregnable, and it is unwise to put a terrier into them. Foxes will fight to the death in them rather than bolt, and the terrier or terriers may become fast in them and unable to work their way out. Many a terrier has been lost in such earths in the north of England. As an example of what a good terrier can do underground if foxes refuse to bolt, I may mention Corby, a terrier that belonged to Lord Decies. Corby was one day put to ground in the Ullswater country, where she remained for twenty-four hours, and when unearthed she was found to have killed three large dog foxes, the total weight of the three being sixty-two pounds. Which reminds me of another terrier belonging to a Fell Hunt. He was a black dog named Nick. Someone wrote to the Master asking him if he had a really hard terrier to dispose of. In reply he sent Nick. On arriving at his new quarters, the terrier was first tried in an artificial

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earth. In went Nick, and all was quiet except for some bumping sounds. As neither did a fox bolt or Nick reappear, the earth was opened up, and there was the terrier contentedly chewing at three dead foxes. The next train saw Nick on his way home. He had proved himself a bit *too* hard.

Amongst the hills of the north of England and Wales rock earths predominate, and hunted foxes can get in anywhere. It is surprising, however, what a good percentage of foxes are killed in the open by the Fell and Welsh packs.

Occasionally one comes across foxes which appear to live entirely above ground, and seem to know no earths or drains, although there may be both within their beats. In the 1930 season we killed such a fox with a Fell pack. This fox lived on an area of moorland ground, and had subsisted chiefly on rabbits which it purloined from the rabbit-catchers' snares. Its claws were long, showing that it had not done much travelling. Hounds found this fox on a moderate scenting day, and beyond a fairly fast preliminary round, they practically walked it to death, and killed it in the open. The fox passed drains and other places where previous other foxes had gone to ground, but it ignored them all, and seemed entirely ignorant of all subterranean retreats.

A fox has four gaits, walk, trot, canter, and gallop. When hunting for food, a fox covers most of the ground at a walk. When disturbed he usually canters or gallops. In over a quarter of a century's experience of foxhunting, during

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which period I have viewed hundreds of foxes both on hunting and non-hunting days, I have seen very few foxes trot as compared with those that walked or galloped. That a fox does trot there is no denying, but I am inclined to think he walks and canters more than he trots. A fox has a beautifully smooth action, seeming to glide over the ground in a most effortless manner.

In an ordinary hunting country a fox is not liable to accidents, but on the mountains he may get into difficulties. In the Fell country of the north of England foxes lie in the crags, and resort to the latter when hunted. Sometimes a hunted fox goes from ledge to ledge until it is properly cornered, and if some venturesome hound manages to reach it, both of them may topple over and end their lives on the rocks far below. A hunted fox will on occasion fall from a surprising height and pick itself up apparently little the worse. A cat is said to have nine lives, but I am sure a fox can go one better. I have seen one bolted from a rock earth and rolled over by hounds, after which the carcass was placed upon a boulder. In a few minutes the supposedly defunct fox came to life, and made a fresh bid for liberty.

There is a lot of difference between the sprightly gait of a fresh fox and one that has been hard run. The latter holds his head low and arches his back to some extent. Should he, however, see you before you see him, he may go off for a short distance almost like a fresh one. A dead beat fox is usually said to trail his brush, so that the latter becomes dirty and clogged with mud. After many years hunt-

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ing on the hills of the north of England, during which period I have had exceptional chances of viewing beaten foxes at quite close quarters, I can truthfully say that I have never yet seen such a fox with a dirty brush. I have watched a fox run to a complete standstill within fifteen yards of me, yet his brush was clean, and he himself did not look dirty. A fox does not sweat through his coat like a horse, but "pants" like a dog, lolling his tongue out after he has run some distance. If a hard run fox lies down his brush, of course, comes in contact with the ground; but as long as he keeps on his legs he will hold it clear of the ground.

When a beaten fox is rolled over by hounds he dies very quickly, far more so than an otter, whose tough loose skin almost defies hounds' teeth, unless one of the pack happens to crush the skull. A fox dies fighting, and so does an otter, the latter marking more hounds in the *mêlée*.

A fox is a good swimmer, and will readily take to water when hunted or when out in search of food. In a stone-wall country a hunted fox will often run the wall tops and slow hounds down by so doing. One often hears it said that a fox will not face a strong wind, yet on occasion a hunted fox will run against a gale if he has a particular point in view. Standing very near the ground, he offers comparatively little resistance to the wind.

Besides lying down when dead beat, a fox will often lie very close when hounds are drawing for him. As long as he keeps still he gives off very little scent, and if he remained still, hounds might fail to find him. Like certain other crea-

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tures, however, such as the hare, he often fails to brazen it out, and moves too soon, thus giving the show away. In snow, if the surface is crusted, a hunted fox has the advantage over hounds, for he can run on the top, whereas they, with their greater weight, break through. If the snow is soft and deep, hounds, with their longer legs, score over the fox. I once was shooting in the snow when a fox sprang up nearly at my feet. The depth and consistency of the snow made it difficult for him to put on any pace, and for a bit he rolled about like a ship in distress.

A hunted fox entering a covert where there is another fox may succeed in shifting the burden of pursuit on to a fresh pilot. He may perhaps visit some hollow tree that he knows of, and should it be occupied he will turn the occupant out. Unless drains are grated hunted foxes can get into them, old and forgotten drains often serving as underground retreats for them. A hunted fox may look in at a drain mouth and then go on, or he may enter it. If he enters he may stay there, or again he may go right through it if it is not a long one. At times he may find another fox inside. If hounds mark, and a terrier is put in, the fresh fox is more likely to bolt than the hunted one. I remember a day on the hills when hounds put a fox to ground in a short drain. The terrier was sent in, and a fresh fox appeared. Hounds rushed him downhill, and rolled him over before he could get a fair start. In the meantime the hunted fox bolted and managed to reach an impregnable rock earth where he had to be left. Turned down foxes that have been hand-reared,

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or foxes that have had food placed out for them by the keepers, generally become scavengers and short-running brutes, with no knowledge of the country. Such foxes become a nuisance to poultry keepers and are best dug out and killed if hounds can put them to ground. Certain old foxes manage to find safe retreats in disused drains and other places where they are seldom if ever disturbed. If hounds meet really early in the morning they can pick up the drag of a fox that has been out during the night, and it may lead to the retreat of some old customer that has been seldom if ever hunted.

A fox that has been much hunted, may slip away from covert the moment he hears the slightest sound that betokens the approach of hounds. There is at least one instance of a fox that used to slip out of covert and lie in a ploughed field when he heard the Hunt approaching, and when hounds left the vicinity he returned to the wood.

A rather curious incident happened one day with a Fell pack: hounds divided, and one lot ran a fox to ground in a strong rock earth. A terrier was sent in, but failed to bolt the fox, so both were left. Later in the day, when the huntsman with the rest of the pack was going home via a road not far from the earth, somebody looked back and saw what they thought was the terrier following them. One of the hounds stopped at a gateway, and whilst it was there the supposed terrier passed it. The hound came on and suddenly gave tongue. The terrier turned out to be the fox which had finally bolted from the earth. The pack was laid

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on, and after a twenty-minute run rolled their fox over in the open.

If a hunted fox gets anything like a fair start he can out-distance hounds. On really rough uphill ground no hound living can catch a fox unless the latter is dead beat. For his size a fox is extraordinarily fast for a short distance, and even if hounds are all around him it is marvellous how he will get clear.

Apropos of a fox lying close, I was shooting one day, and entered a very small enclosure in which some young larch trees had been planted. The undergrowth consisted of long grass. A wire netting fence surrounded the young trees to keep the rabbits out. A hare sometimes lay in this small enclosure, so I got over the wire and proceeded to walk through it. I had not progressed far before a fox got up literally at my feet. He jumped the netting and made off uphill where I finally lost sight of him.

A hunted fox may be easily headed, or he may not. A fox that is near an earth and is determined to get in, will often do so in the face of men, whip-cracking, and halloing. On the hills where there are big rock earths, it is sometimes impossible to stop a fox going to ground. He will almost run over you before he will be turned. Motors at one time no doubt frightened foxes, but the latter know well enough what they are now. To-day the trouble is not so much that motors head hunted foxes, but that the fumes, from their exhausts, foul the air, and prevent hounds from owning the line.

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A fox is a wonderful climber and jumper. He will go over big stone walls like a cat. In a stone-wall country, a huntsman may get frequent views of his fox as it tops the walls. When jumping, a fox has a peculiar habit of taking a thing on the slant. A three-year-old dog fox brought up by hand, had the free range of a stable, where he often lay in one of the mangers, into which he had to jump. Instead of leaping straight into it, which he could easily have done, he always sprang at the end wall and then threw himself sideways from that into the manger.

In winter a fox can get about on frozen slopes where hounds cannot follow. I have seen a fox go up a long frozen snowdrift, walking quite easily, whereas hounds could get no foothold on it. A fox has a certain amount of hair between his toes, and this probably prevents him from slipping. He is also much lighter in weight than a hound.

A hunted fox, like a hunted hare, will sometimes stop to roll. A hunted fox doing this on manure or other filth retains some of the odour of the latter, and may possibly check hounds. I do not think, however, that the fox does this purposely, knowing that his scent will be partially or entirely obliterated, but simply because it is his natural habit to roll on carrion, just as a dog does. There are occasions, I think, when hounds connect the smell of the filth with the line of their fox, and if the smell is strong enough they will run him hard, even if they could not do so previously. A foxhound is no fool and quickly tumbles to the situation. There are plenty of instances on record of

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hunted foxes killing and carrying off poultry, etc., during the course of a run. A fox that is full fed, will pass through, or close to, rabbits or pheasants without bothering with them. Both pheasants and ducks show interest in a fox, and both will follow it. This fact was well known to the old-time duck decoy men, who used a fox or a reddish coloured dog to lure the fowl into the netted enclosure.

A hunted fox with a full stomach will stand up before hounds less well than one that is empty. The earlier in the day a fox is found, the more full his stomach is liable to be. In spring the dog foxes often afford long runs. They are so keen on their love-making that they have no time to feed, and they are in rare running condition.

A dead beat fox that gets amongst houses or farm buildings, will seek refuge anywhere, getting on to the roof of a shed, going upstairs into a bedroom, or even up the chimney. A hunted fox may cross a river or a lake on the ice, and if the latter only just bears him it may let hounds through, some of which will be drowned. This is more likely to happen in America than England. When it does occur, hounds that are "back at the knee," and have dew-claws, are far more likely to pull themselves out on to the ice than the cat-footed, short-pasterned sort, without dew-claws.

One day in February, 1927, when out with a Fell pack, we saw a dog following a vixen. Hounds brought their hunted fox close past them, and on hearing the cry, the two joined the hunted one, and for some distance the trio

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ran together. Hounds divided, each division killing their fox after a fast run.

One day when out with a Fell pack, hounds ran their fox to ground and marked him vociferously. There was a lot of noise, what with the cry, and shifting of boulders. Whilst this was going on a fox across the other side of the narrow valley was calmly feeding on the carcass of a dead sheep.

In the *Hunting* volume of the Lonsdale Library, the author of the chapter on "The Fox" says that: "It is probably a dependence on keener ears than his own that accounts for an outlying fox being frequently found close to a hare; the latter's sense of smelling and hearing being particularly acute." One hesitates before differing from such a well-known hunting authority as was the writer of the above, but I think it is doubtful if a hare has a keener nose or ears than a fox. Then again, on the approach of danger, it is the hare's habit not to go off at once, but to shrink closer in her form, by doing which she can hardly give warning to a fox, unless the latter was right alongside her. A hare sits very close, but usually just fails to brazen things out. A fox *may* lie close too, but generally goes away much sooner than a hare would.

With regard to the stamina and fitness of a hunted fox to run far and fast, I have heard the opinion expressed that a creature that has to work for its food will always be in better condition than another such as the foxhound that has its food brought to it. Under a capable huntsman foxhounds are just about some of the fittest creatures on earth,

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and they arrive at the meet ready to run all day. They have been fed according to their individual requirements, and before going hunting their food has been thoroughly digested. A fox, on the other hand, feeds at irregular intervals, more particularly in a hill country, where weather conditions are often severe. As a rule he feeds at night, and the exercise he gets is taken on his hunting expeditions. This exercise is generally speaking not fast, and if food is plentiful he has no necessity to travel far in search of it. When he returns to his kennel in a full fed condition at daybreak he is in anything but good shape for running. The earlier in the day he happens to be found, the easier is it for hounds to overhaul him, provided scent serves. An afternoon fox is in better fettle than a morning one, while probably the hardest and fittest customer of all is the old dog fox in the mating season, who has travelled far beyond the confines of his regular beat in search of a vixen.

Pace is, of course, the criterion as regards the amount of pressure that hounds can bring to bear on their fox, and pace is entirely dependent on the quality of the scent, for hounds cannot travel faster than their noses. A fox is extraordinarily fast for a short distance, and uphill over rough ground can easily beat the most speedy hound. Goosey, the famous Belvoir huntsman, begged leave to state that the fox was a toddling animal, by which he meant that a hunted fox will keep putting a longer and longer interval between himself and the hounds unless the latter are able to keep up sufficient pressure. On a tip-top scenting day a

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fox cannot stand up before hounds for more than twenty minutes or half an hour. When scent is moderate or catchy, hounds have to work hard all the time to own it, and they take more out of themselves than during a fast, straight run. The fox, on the other hand, slows his pace and keeps pottering on, thus gaining time. The slower he goes the less heated he gets, and the better chance he has of running hounds completely out of scent.

Speaking of hunted foxes, in the early part of the 1935-1936 season, a Fell pack was hunting some big woodlands in the low ground. For fifty minutes they had given their fox a regular dusting round and round a large covert, when he finally broke and set his mask towards another wood some distance away. My wife and I happened to be near a low stone wall, and we spotted the fox heading straight for us about sixty or seventy yards away. Within a stride or two of where we stood was an open gateway, and making sure that the latter was the fox's objective we crouched behind the wall and kept our eyes glued on the opening. The fox was dead beat, and it seemed unlikely that he would jump the wall. As it happened, however, he did jump it, and as we had our backs to him he slipped past unobserved. From a nearby road other members of the field were watching the scene, much to their amusement. Hounds forced their fox through the covert, and killed him, stiff as a poker, in the middle of the main road.

In the case of a dead beat fox I have noticed time and again that he never looks back when hounds are drawing

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near him. We humans instinctively look back if anything is in pursuit of us. I remember an occasion some seasons ago, when hounds forced their fox down off the fells and ran him into a hillside covert. Between the place where I stood and the wood ran a beck. I saw the fox come down through the trees and turn along a rough track. Leaving the latter he walked slowly to the beck where he stood on a large stone. There he remained like a statue till hounds ran right up to him, and it was not until the leading hound was about to seize him that he made a final spring into the middle of the beck, where hounds killed him.

When running, hounds are so occupied with their noses that for the time being they are to all intents and purposes blind. If their fox suddenly claps they are likely to run over and past him. I remember an instance of this when cub-hunting. Hounds found a cub on the side of the fell, and after a fairly fast round the cub headed back towards an earth in a ghyll. The earth was guarded, however, so the cub sheered off, and finding hounds uncomfortably close, suddenly lay down on a slab of rock. Not a hound saw him, though he was in plain sight. Quickly finding out their mistake hounds swung back and caught a view as the cub jumped up. They coursed him for a short distance and rolled him over.

Speaking of cubs, one morning during the 1935-1936 season my wife and I set off early to guard a large rock earth or borran. It is a practically impregnable place, and once a hunted fox gets in you can say good-bye to him.

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We made a cautious approach to the earth as we knew there was a litter of cubs there, and being a fine sunny morning we thought some of them would be lying out. Sure enough as we peeped over a nearby ridge, two cubs were lying amongst the boulders. One was curled up, but the other was wide awake and spotted us. We watched them through the glasses for a minute or so, then stood up. One cub promptly went to ground, but the other slipped down the hillside amongst the rocks. Thinking I could perhaps force him away from the earth I hurried down on to the latter, and was crossing it to reach a viewpoint when I met the cub returning. I halloed and threw my stick at him, but he got in almost at my feet.

By that time we could hear hounds in the distance, and soon saw them coming towards us. They were dragging, and as a likely crag lay below us we kept a sharp look out. No sooner did hounds reach the crag than the music of the drag changed to the full-throated chorus of the chase, and there was a fox slipping along amongst the rocks. When he came in view the leading hound was hard at his brush, but he pulled away and headed straight for us. We halloed in his face, and my wife broke her stick in her efforts to turn him. Turn he did, much to our relief, only to try the earth at the other end, however. Again we saluted him with halloas, and once more he sheered off, this time to head for the open fell. We remained at our post and watched hounds go away until they disappeared in the distance. A quarter of an hour passed, then we heard them again. Soon we saw

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them coming back over the skyline. By then our small party had been reinforced by some other members of the field. My wife was the first to spot the fox, and it was plainly evident that the earth was his objective. As he drew nearer, however, he was saluted by such a chorus of halloas that he thought better of it and turned away. Shortly after he went to ground in an easy place, from which he was bolted and killed.

As previously mentioned, one hears it said that a hunted fox dislikes running against a strong wind. On occasion, however, a fox will face a gale. I remember a morning in pre-war days when I was in the company of a Fell huntsman and we were sheltering behind a boulder. It was a wild, windy day, in fact the wind was so strong that when facing it we could scarcely breathe. There was snow on the ground at the time, and hounds were running a fox on the fell side beneath us. We were just about to leave our shelter when we espied a fox coming towards us. He was travelling right in the teeth of the gale, which did not appear to trouble him much. I remember his fur seemed to be blown close to his body, giving him a very smooth, slick appearance.

On another occasion, in December, 1919, hounds ran a fox upwind against an icy gale on the tops, when the wind was so strong that we who were following them had more than once to lie down or be blown over the edge of the fell.

A hunted fox can disappear in miraculous fashion at times. On one occasion two of us were watching a single

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hound running a fox very hard. Eventually the hound stopped and began to mark on the ledge of a small crag, so we crossed the valley to investigate. With us we had a terrier. Arrived at the spot I climbed on to the ledge, where there was some cover in the shape of blaeberry scrub, but there was no sign of the fox. The hound had left the ledge and gone down below. Beyond the blaeberry growth there was nothing but a small patch of juniper lying flat against the face of the rock. The hound returned to the ledge, and again marked above this strip of juniper. The latter appeared to grow out of the solid rock. My companion then climbed up and tossed the terrier on to the ledge. No sooner had the dog landed than he made for the juniper and his legs went through. We then knew where the fox was, for the terrier yelled blue murder, the fox having promptly bitten it. The next instant the fox appeared and dropped to a narrow ledge below, where he stood hesitating to face a much longer drop to the ground. First he looked up at me, then down at my companion. Cut off from above he faced the drop, and away he went with the hound and terrier in pursuit. After crossing the dale he got in under a big stone where he was soon accounted for. Beneath the little patch of juniper on the rock face was a small crevice into which the fox had squeezed himself. Looking at the place one would have said it was impossible for a fox to be there.

CHAPTER V.

SCENT OF THE FOX

THE great charm of foxhunting lies in its uncertainty. If we knew we were going to have a screaming run every time we went out, we should very soon tire of the sport. Blank days are rare, for in most countries there are at least sufficient foxes to ensure finding. When you have found your fox you don't know what he will do, or whether hounds will be able to run him. The whole business is dependent on scent, and although in the light of modern understanding it is possible to determine what scenting conditions are like before hounds go to the meet, those conditions may entirely alter during the course of the day, so that after all we are kept guessing.

Statements with regard to scent were mostly theoretical until Mr. H. M. Budgett published his book, *Hunting by Scent*. His experiments showed that the earth breathes, and at times air currents are rising from it, while at other times air is being drawn down into it. When the earth exhales, hounds can run well, scent being often breast high; whereas, when the earth inhales, hounds have to get their noses right down to the ground before they can own it. Scent-indicating instruments are now obtainable, which indicate with certainty whether scent will be favourable or the reverse.

There are many things which tend to neutralize scent,

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too, such as grass or ground plants which have been crushed underfoot, the presence in a field of cattle or sheep, manure and other dressings on the land, and the fumes from the exhausts of motor cars. When the earth inhales it is colder than the air, and when it exhales it is warmer. If we remember this, there are certain natural signs that we see on the way to the meet by which we can judge to some extent what scent will be like, although such signs cannot be deemed infallible.

At certain times the human nose can detect animal and other scents almost as well as that of a hound. If you step out of doors early in the morning you can smell scents that are impossible to distinguish later in the day. When working upwind to deer, especially late in the season, it is often quite easy to smell them. In the same way, when going to meet hounds, it is not an infrequent experience to detect the rank scent of a fox where it has crossed the road. Usually when you can thus smell fox, hounds cannot own it.

Scent may vary a great deal during the course of a day. In the morning it may be bad, whereas towards evening there may be a great improvement. Again, hounds may run hard when they are near their fox, but may be brought to their noses if the fox gains a lead. Every fox smells, although some give off a stronger scent than others. A live fox in the hand is not exactly a bouquet of roses. Both dog fox and vixen probably have a ranker scent during the love-making season than at other times of year. The behaviour of the fox has a good deal to do with the way in which hounds can

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run. A straight-necked one is easier to hunt than a short-running, twisting customer. On a real good scenting day, a fox that would perhaps like to run short is forced to go on owing to the pressure from behind. On a less good scenting day he gets time to double and twist, and hounds are thus slowed down and have to use their noses.

As a fox does not sweat through his skin, his coat remains dry. Not far from the root of his brush he has a scent gland, and sweat glands in the pads of his feet. Other glands on his body secrete the oily matter that lubricates the hairs and keeps the coat glossy. The sweat glands are controlled by the nervous system. When a fox is on the move his pads leave a certain amount of oily material on the ground. There is also an emanation from the gland on his brush, as well as from his breath. During the course of a run he may stop to pass urine, or he may drop a billet, both of which add to scent at the spot. If a fox gets urine or other filth on his pads or body, hounds may run him harder than they did before.

Lying quiet, a fox gives off little scent, his gentle breathing being probably all that then comes from him in the way of smell. If he *keeps* still, hounds may then pass close to him and fail to wind him, whereas if he only slightly shifts his position a whiff of scent may give him away.

As the glands of a fox are controlled by the nervous system, any sudden shock to the latter, such as being chased by a cur dog or suddenly entering cold water, must affect the quality of the scent for the time being. When a cur has

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chased a fox, the scent of the former will be for some distance mixed up with that of the latter, and I have heard it said that hounds fail to hunt a fox so chased, not because he has received a fright, but because they have been schooled not to run the line of a dog. It is hardly a tenable explanation, however, for hounds often fail to pick up the line again, even when far beyond the point where the dog gave up the chase. A more probable theory is that the sudden appearance of the dog at close quarters temporarily puts the wind up the fox, and the latter's nervous system automatically shuts off the scent. The same thing seems to occur more or less after a fox has had a sudden immersion in cold water.

With failing powers the scent of a fox weakens. The old hounds recognize by some subtle change in the scent that they are drawing closer to their quarry, and they push towards the front ready to run from scent to view.

When scent is bad, and a fox is loitering along in front of hounds, the latter, being solely occupied with their noses, may not see him even though he be close in front, and plainly visible to a man on foot or on horseback.

Water retains the scent of a fox just as it does that of an otter. When a fox crosses a fast running stream some distance in front of hounds, his scent is carried down by the current, but hounds can usually wind the line on the opposite bank. In still water the scent is longer retained.

A fox that gives battle to a terrier underground emits a very powerful smell during the encounter. At a big rock

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earth amongst a mass of boulders hounds will rush about and mark first at one spot and then another when the fox is moving and probably ready to bolt.

A dog fox will follow a vixen by scent, just as a buck hare runs the line of a doe. No doubt at those places where foxes "drop their cards" as they pass, the various scents convey vulpine messages just as speech does to us humans.

It being a fact that the faster a fox runs the more scent he gives off, one that only toddles along on a bad scenting day is usually very hard to kill. If even the slightest amount of blood is emanating from a hunted animal, hounds can generally run hard.

It is customary to surround the nests of partridges with evil-smelling liquid in order to protect them from foxes. I think in some instances foxes have come to connect the new smell with a possible feed, for having once taken birds from nests so protected the aroma merely acts as a plain guide to a nest. The odour of the fox does not cling to his fur when the latter is used for commercial purposes. The scent of a deer is stronger than that of a fox. When hunting deer stag-hounds often run in file, and do not carry a head like fox-hounds. Also on certain days hounds will run mute or nearly so, while on other occasions every member of the pack will speak to it. The feet of deer leave a certain amount of oily secretion on the ground, and scent comes from the metatarsal glands situated on each hindleg below the hock.

The stratagems employed by a beast of chase like the hare, which frequently doubles and retraces its footsteps,

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are futile if scent happens to be really good. When hounds can scream along their quarry has to run and run fast, and it gets no time to double. The fox is given credit for being a cunning beast, and able to outwit hounds by its tricks. It would be more truthful to say that it is not so much what a hunted animal does that helps to save its life, but the quality of the scent at the time. A close-hunting pack of hounds and a persevering huntsman can walk a fox to death if it stays above ground, even on a very poor scent.

Dog foxes seem to carry more scent than vixens. It is said that hounds will not run a vixen properly when she is in a certain condition, but I have often known them to do so. A fox is a fox, and hounds are no respecters of the vulpine fair sex. When hunting on the hills on foot, hounds cannot be stopped off a vixen as they can in a riding country; thus a prospective mother of a litter may be rolled over. In some instances hounds can barely own the line even when a fox has only just gone. In others there may be a deferred scent which they can run better than when they are near their fox.

Some foxes naturally smell stronger than others. The kind of food that a fox has eaten will influence his scent. As already mentioned there are many things that tend to neutralize scent. Our own noses can at times easily detect the smell of various plants, and if the latter happen to get crushed underfoot they smell even more strongly. Wild mint, thyme, and mustard are examples of this, while ordinary grass crushed by the feet of cattle or sheep gives



TRACKS OF RUNNING FOX IN THE SNOW



TRACKS OF PLAYING FOXES IN PEAT SOIL

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off a smell of its own. Sheep and cattle themselves smell strongly, their scent often obliterating that of the fox. Wet earth which sticks to the pads of a fox will spoil scent, and dry, dusty ground, such as sun-baked ploughland, burned heather or grass, and dry sand irritate hounds' noses and make it difficult for them to hold the line. Ordinary and artificial manures also kill scent, while the exhaust gases from motor cars not only act as extreme irritants to hounds, causing them to sneeze continually, but being heavier than air remain on the ground near main roads, making large areas inimical to scent. In spring the ultra-violet rays of the sun generally cause scent to vanish. It is for this reason that in Lakeland when the Fell hounds are out to put paid to the account of some lamb-worrying fox, they start very early in the morning, before the sun has power to dispel the dew. On a windy day the smell of the oily matter left on the earth by the feet of a fox or other quarry is borne by the breeze, so that one can see hounds running far to one side or the other of the actual line. It was the immortal Jorrock who said, "Take not out your 'ounds upon a werry windy day," and his advice is good, but for all that I have seen hounds run like mad in a gale, screaming along yards wide of the line. Poor land seems to carry a better scent than good land, while limestone, unless damp, seems always inimical to it. Soft snow often carries a good scent, and I have often seen hounds run well in it on the hills. If the snow is deep they have the advantage over the shorter-legged fox.

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There are certain natural phenomena which foxhunters have been accustomed to note on hunting days, and from which they have drawn conclusions regarding the likelihood of good or bad scent. The latter may be catchy or bad when the weather is changing, and a storm is impending. When the sun thaws a white frost scent is always bad, and equally good when frost settles on wet ground. In the opinion of many people poor scenting conditions are foretold by a falling barometer, an east wind, a blue haze, or spiders' webs on the hedges covered with hoar frost. On the way to the meet hounds may indicate by their behaviour whether scent will be good, viz. if they continually stop to eat grass to make themselves sick. On arrival at the meet should hounds roll, scent is likely to be bad. On the Lakeland fells there now and then comes a day when the atmosphere is very clear, and there is an absence of wind. Overhead the clouds look heavy, and the day may be described as "dark." The colour of the distant hills tones from indigo to mauve; but for all the general effect of darkness, every stone and crag show up distinctly. On such a day I have often known a screaming scent, while hounds could both be easily seen and heard.

While the modern huntsman can, if he likes, purchase a scent indicator which will automatically register whether scenting conditions are good or bad before he and his hounds go on to the meet, his hounds will be his registers during the remainder of the day. Scent can change, and hounds are the only ones that know it has done so. The

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great charm of foxhunting, viz. its uncertainty, has not been eliminated from the sport, and let us hope it never will be. If it was I expect we should quickly turn our attention to something else.

Red-letter days in the hunting field, when hounds can scream after their foxes, are like first-rate fly-fishing days, few and far apart each season, and therefore all the more appreciated when they do come. One has only to glance through the pages of a hunting or angling diary to prove this.

CHAPTER VI.

FOX COVERTS AND ARTIFICIAL FOX EARTHS

ALTHOUGH the fox is a more or less nocturnal animal, he will, as far as my experience goes, generally be found lying above ground in some sheltered spot during the day, provided the vicinity is free from disturbance, and the weather is not too bad. Foxes, like deer, will often lie up near human habitations, or where the sounds of passing traffic are plainly to be heard, as long as they are not actually disturbed by men or dogs.

A fox is a small animal, and it does not take much to shelter him. High up on the fells of the English Lake District the weather in winter is often very severe, the rainfall being heavy. There are no coverts on the fells, the foxes lying on ledges in the crags, or amongst the rocks. Even after a stormy night and with rain still falling on the following morning, it is often possible to find a fox or foxes above ground. A heather-covered ledge in a crag with an overhang of rock behind it keeps off most of the rain, while amongst loose boulders there are plenty of dry places to shelter a fox. During a period of hard frost and snow, foxes constantly lie above ground, for they can then keep their coats dry and cold holds no terrors for them. Under natural conditions a fox may be found lying almost anywhere. In

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a moorland country he will make his kennel amongst the heather, while in a woodland district he finds ample choice of shelter. In a country of small, scattered coverts he will lie in one of the latter if they contain suitable shelter; otherwise he may elect to kennel in some thick hedge, or even in a ploughed field.

Wherever you find him you can rest assured that the actual spot on which he lies is dry, although it may be more or less surrounded by water. The fox that wades through some inches of water to dry lying amongst a clump of rushes leaves scent behind him, but it quickly disappears. As foxes are fond of hunting near water, they often lie in osier beds and similar damp surroundings.

In a hunting country that is not well stocked with foxes, it is of course desirable to do everything possible to encourage them to remain in it. Like deer they soon discover any place in the nature of a sanctuary. Thus big woodlands that are not too frequently disturbed by hounds attract foxes to them, to the detriment of other parts of the country.

When there are not sufficient coverts to afford suitable lying for the desired fox supply, new ones will have to be planted. In an open country such coverts are practically indispensable, and they should be of such size that hounds can easily force a fox away from them, even if he is disinclined to face the open. A covert of from four to five acres in area will fill the bill.

The easiest form of covert to make is that known as a

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“stick” covert. Thorns are cut and stuck into the ground at intervals, and the natural grasses allowed to run riot amongst them. In a grass field there is nothing to do but stick the thorns in, but on ploughed land coarse grasses must be sown to provide the necessary lying. If the thorns are put in in spring, and the field is fenced against stock, the covert will hold a fox the following winter. Such a covert is not permanent, and when hounds draw it the dead thorns puncture their feet, and usually remain in the wounds, causing very troublesome sores. The only advantage of a stick covert is that it may hold one or more foxes the first season.

Permanent coverts are of course desirable, and the best consist of gorse, evergreen privet, and blackthorn. Laurels and rhododendrons are also of use in covert, but beneath them the ground is easy of access, and will not debar the entry of wandering dogs should they penetrate the boundary fence. Gorse is less affected by cold winds and wet than other plants, and for this reason is eminently suited for a fox covert. It is well, however, not to make a covert of but one kind of plant.

Many a corner of rough pastureland contains the makings of a good fox covert if it is fenced in and kept quiet. If you want foxes to use a covert, especially a small one, the great thing is to see that it is not disturbed by dogs or human beings. The matter of disturbance applies to the M.F.H. quite as much as outsiders, because if he draws such a covert too often foxes will cease to use it. I know of

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two coverts of this description, both of which at one time contained tall trees. After the latter were felled and sold the ground was allowed to grow what it liked, the result being that all kinds of scrub gradually made their appearance, and what with brambles, long grass, heather, and the like, there was plenty of good lying for foxes. The only expense connected with such a covert is the cost of fencing it in. A fox will lie in quite a small place if the latter provides shelter and is kept quiet. In a previous chapter I have mentioned walking up a fox in a small enclosure in which young larch trees and long grass formed the lying. This enclosure was less than fifty yards square, yet it was regularly frequented by foxes until with the growth of the larch the ground became bare.

Five to ten acres of ground, preferably with a southern aspect, afford a suitable site for the construction of a fox covert. Planted with evergreen privet, gorse, and black-thorn, or gorse alone, a snug covert will gradually come into being. The thicker a fox covert is the better. For instructions as to the planting and management of fox coverts, I refer the reader to the *Foxhunting* volume of the Lonsdale Library, or to a small book entitled *The Management of Fox Coverts*, by the late W. M. Wroughton, formerly Master of the Pytchley and of the Woodland Pytchley Hounds. The book is published by Vinton & Co., Ltd.

The fewer rides there are in a covert the greater privacy does it afford. In a covert of fair size one ride is sufficient

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for the huntsman when drawing, while a small covert does not require one at all.

Whilst there are in most countries a sufficiency of natural earths, it is sometimes thought necessary to construct artificial retreats for the benefit of foxes. Opinions differ regarding the utility of artificial earths, but it is safe to say the less you interfere with nature in such matters the better. In most artificial earths there are stone or flag-lined entrances, while the inside ramifications of the retreat are much restricted in the matter of room. Any people of doubtful character can easily bolt or kill a fox with terriers in such an earth. The plan on which it is made is too simple, whereas in a big natural earth a fox has several avenues of escape.

An artificial earth can be made with either bricks or 9-inch drain pipes. The earth is really a dry drain with two lying-up places or dens. A plan and description of how to build such an earth is given in the *Foxhunting* volume of the Lonsdale Library.

An artificial earth which is not so great a departure from the natural as that made of pipes or bricks is known as a stick heap. The ground plan should be about thirty feet by thirty feet, with nine feet to twelve feet between the fences and the outside of the heap, if the latter is made in the corner of a field. The walls of the latter are built up with old trees, roots, stumps, etc. These having been built, the middle is then filled in with similar material, laid so that passages are left from the three entrances—at the inside corner and the

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two sides—towards the centre. The material should be so arranged that beds or lying places are left near the middle. Near the entrances the stuff should be laid so as to exclude as much draught as possible and to keep the interior dark.

The walls and interior being completed, smaller logs, roots, etc., should be so placed as to cover the open spaces or beds, and to prevent the next layer of stuff from filling them in. A trench is then dug round the heap, about three feet from it. Each entrance is temporarily stopped with a block of wood. Strong thorns about three feet high are then stuck in the trench all round, and the space between them and the wall of the heap is filled with thorns or hedge trimmings. These help to keep out both light and draught. Over the whole thing is next laid a few loads of strong thorns, built up until the heap is about eight or nine feet high. After this has been done the blocks which have prevented the entrances from becoming filled up may be withdrawn. The heap is then finished, with the exception of fencing it off on the two sides facing the field. Foxes can be bolted from such an earth by means of long poles pushed down through the thorns from above and then rattled about. While such an earth is useful enough, it can easily be disturbed by farmhands or others, and its whereabouts is well known.

A really thick, close growing covert of gorse, or a mixture of gorse and other plants, is the best safeguard for foxes, and the thicker it is the better. Artificial earths are well enough in their way, but it is better to let hounds draw for

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and find their foxes for themselves, and not have them bolted from earths. The less artificiality there is about hunting the better. See that the coverts are kept quiet and don't draw them too often, and they will generally provide foxes when wanted.

It is safe to say that the manner in which earth-stopping is carried out either makes or mars the sport in a hunting country. Gone are the days when that picturesque figure the old earth-stopper went his nightly rounds astride a pony, equipped with spade, bill-hook, and horn lantern, whilst a good rough terrier trotted alongside. Old pictures are all that we now have left to remind us of a type who was fond of sport and keen on his job, otherwise he would never have performed his duties as satisfactorily as he did. Earth-stopping is no dilettante business, I can assure you. It is no light task to sally out at night regardless of the state of the weather. Nothing deterred the old earth-stopper, and he stopped too at just the proper time, so that when hounds arrived on the scene, foxes were out and not in. Hunting was then the premier sport, and men shot only when there was a hard frost and hounds were confined to kennels. By degrees the old order changed, and the duties of the earth-stopper were merged into those of the keepers on the various estates.

The sections of a hunting country are now divided up, and the earth-stopping is left to the keepers, covert owners, and others nominated for the job by the Master or huntsman. Comparing this system with that of the old days

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does not always speak well for the present. One has only to read the weekly accounts of hunts in the sporting papers to find that far too many foxes beat hounds by getting to ground.

Before hounds arrive at the fixture for the day, all earths should have been stopped the previous night in the vicinity of where hounds are to draw, while others within a radius of eight or ten miles should be "put to" in the morning. After hounds have returned to kennels, all earths should be unstopped. Earths that are used by foxes and which lie well away from coverts should be stunk out and permanently stopped at the beginning of the season. This makes the foxes resort to the coverts and use the earths in them. The earth-stopper should periodically visit the permanently stopped earths in order to make sure that they have not been opened. Earths should not be stopped before 10 p.m., because foxes may not have left them before then, and may thus be stopped in instead of out.

Material for stopping earths should be kept handy to the required spots. The best way to stop an earth is by means of a three-foot faggot or faggots, driven in so that a fox cannot scratch his way through. Stones can be used to make the situation still more secure. Faggots allow air to percolate through, thus there is no danger of suffocating a vixen and cubs.

Granted that earth-stopping is a somewhat thankless task, especially in bad weather, it nevertheless holds a great deal of interest for those who really love wild life and like

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to see and hear the night side of it. While there are earth-stoppers who are inclined to shirk the work, the majority are conscientious and do their best to perform their duties properly. It should be part of every budding foxhunter's education to have a night or two in the company of the local earth-stopper in order to learn exactly how the job is done. Such experience teaches a youngster that earth-stopping is not quite the simple job it sounds, and in future he will not be tempted to complain of foxes getting to ground, as so many people do who have no practical knowledge of the earth-stopper's task.

Where badgers are plentiful they are often blamed when a fox gets to ground. While they undoubtedly scratch open earths at times, necessitating their being stopped again in the morning, it is not always the badger that is the real culprit. Sometimes the carelessness of the earth-stopper is the means of foxes getting in. Badgers need never be dug out and killed. If their earths are properly stunk out the animals will promptly betake themselves to fresh quarters elsewhere.

CHAPTER VII.

THE FOX IN CAPTIVITY

WHILE there are times when it may be necessary to save a litter of cubs and bring them up by hand, it is much better to refrain from attempting to tame foxes and keep them as pets. Otters and badgers can be more or less domesticated, but a fox is a creature in whose blood runs the call of the wild, and whose whole nature frets at restraint. While a fox will accept kindness from, and trust a master whom he knows, he is frightened immediately a stranger approaches. Foxes have been made to pay for their keep by working, as for instance those that were used by the late John Gaunt for rat-catching purposes. That was a job that no doubt appealed to their hunting instinct.

Fox cubs are not difficult to rear if they are properly fed, and kept scrupulously clean. One season I got three hill-fox cubs from an earth, after the vixen, which had been worrying lambs, was killed by hounds. I gave one of them, a dog fox, to a friend, and it lived for over three years in captivity. It was kept in a stable, which it shared with an old pony. Pony and fox were great friends, and it was no uncommon sight to see the fox jumping on and off the pony's back.

This fox and one of the Hunt terriers were on friendly

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terms, and I photographed them coupled together. The friendship made not the slightest difference to the utility of the terrier against other foxes, for on the day after I photographed him and his vulpine pal, he ran a long wet drain and collared his fox at the end of it, hounds having forced Reynard to ground. If cubs are taken very young they are quite helpless, being both blind and toothless. At this stage of their existence they should be fed on milk. If a rubber teat with a very small aperture is used they will learn to suck warm milk through it. Better still, is to put the cubs to a cat suckling kittens, or a bitch with puppies. The cur bitch shown in the illustration was very devoted to the cubs she reared. At first I used to give my cubs diluted milk, but they thrived on new milk quite as well. Very young cubs must be kept warm, otherwise they will chill, and die suddenly. As they grow older artificial heat can be dispensed with.

Once they have got the proper use of their legs, they should be kept in a roomy kennel or other enclosure, as they become active and playful, delighting in exercise. When their teeth begin to appear a small quantity of meat may be given them. Rabbit flesh is the best. When I first offered my cubs a bit of rabbit meat they took no apparent interest in it. I then gave some meat with the skin and fur attached to it. This worked a miracle, for directly they nosed the fur they fell upon the meat like little furies. Their natural instinct was awakened on coming in contact with the fur, and they knew at once that the meat was something to eat. I



THREE YEAR OLD DOG LON



FOX CUB

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tried the same experiment with a young hedgehog which I brought home to photograph, and it reacted in exactly the same way. When I carried the hedgehog back to the place where I found it, it was still sticking firmly to its bit of rabbit flesh and fur when I pulled it out of my pocket.

Even after my cubs could take meat they still sucked milk through a teat, and it required some patience and persuasion before they would lap from a saucer. They were fond of gnawing and playing with bones, and used to growl furiously if I interfered with their food. Absolute cleanliness of their abode is of vital importance if the cubs are to grow up healthy and well. Once they begin to feed on meat water is better for them than milk, and a clean supply should always be within their reach. In a wild state water is their only drink, and flesh, coupled with beetles, frogs, etc., their chief food.

Anyone who has watched a litter of well grown cubs at play in a large enclosure, will discover why a fox can so easily beat hounds for pace on very rough hill-ground.

I once spent several days watching and photographing seven cubs—six dogs and a vixen—which were being reared in a kennel. Their food consisted of young rabbit carcasses slit open. Two or three cubs would grab a rabbit, and a tug-of-war ensued, generally ending in a free fight. One cub would fly at another, their movements being so quick that the eye could hardly follow them. Their favourite grip in these fights seemed to be across the loins, though sometimes a throat hold was used.

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As each cub secured its share of food, it darted behind the nearest shelter, or sought a corner of the yard. Those not taking part in the struggle crouched down and watched the performance. When one cub approached another in hopes of sharing the feast, the one feeding would growl furiously. The vocal sounds of these cubs formed a curious medley of cat and dog noises.

Occasionally one of them would bark, holding its head low, the sound being a sharp wow, wow, wow, the last note being longer drawn than the rest. The only vixen in this litter was much tamer than her brothers, and did not take part in the scrimmages at feeding time. One of the dog cubs carried his brush like a collie, with a decided curl at the tip.

As these cubs were to be turned down they were in no way petted, and never became really tame. The wilder they are before being given their liberty the better, from a hunting point of view. Four cubs that I once visited were in a dog kennel divided in the centre by iron railings. The lower half of the latter was covered with wire netting. The cubs, when at play, used to fly up the netting and squeeze through the bars above. They would repeat this exercise again and again, evidently enjoying it immensely.

One day when photographing the cubs first mentioned, I was kneeling down close to the side wall of the enclosure, with my finger on the trigger of the camera, when the little vixen squeezed past and touched my elbow. Click went the shutter, and she had virtually taken a picture of her brothers.

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Cubs in captivity do better if they are given some beetles, frogs, and fruit, in addition to meat. Cubs that are turned down to fend for themselves very often become a nuisance to poultry owners, and not knowing much country, afford little or no sport when found by hounds.

Cubs that are badly fed and kept in unwholesome quarters generally develop mange, and if set at liberty spread that dread disease amongst other foxes. Foxes that pick up poison, but do not die, may get mange; also those that have been shot at and wounded. Foxes that are bought from dealers, too, may arrive in dirty crates or baskets, and probably come from a veritable hotbed of mange.

Hounds as well as terriers will respect a tame fox that they are used to. There is a difference between the scent of a tame fox and a wild one. Old hounds are not at all keen to run the line of a bagman, although puppies and riotous ones will do so cheerfully.

Years ago a Mr. Temple, of Stover, kept foxes which he used to turn down for his hounds to hunt. Some of these foxes, when at home, were on perfectly good terms with the hounds. Not all of the fox family leave a scent behind them. The little fox of Bengal and the desert fox of Scinde are practically scentless, and hounds can seldom run them farther than they can see them. A fox cub that escapes *may* return, but the odds are it will not. Such a cub goes out into the world with its natural instinct to guide it, but minus any teaching by a mother or knowledge of the country. It goes, too, at a time of year when hunting is in full swing, and if

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hounds find it it stands a very poor chance of escape. Even if its luck holds, and it survives the hunting season, it will probably turn into a robber of hen-roosts, and prove a short-running, unenterprising customer.

CHAPTER VIII.

THE FOX IN ART AND FABLE

To anyone with experience of hunting and close contact with foxes it must be apparent that the red fox has been and in most instances still is, poorly represented in art. Some 20,000 years ago the ancient cavemen drew pictures of animals that are not to be bettered to-day as far as character and movement are concerned. The cavemen were hunters, and what they demanded in a drawing was a true likeness of the creature depicted. To-day a sportsman is a better critic of an animal picture or a hunting scene than a non-sporting observer. Criticism in cavemen days was probably far more severe than it is at present, and doubtless the artist came in for something more than ridicule if his drawings failed to reach the then existing standard as regards sincerity.

When the cavemen hunted they pursued animals for food, and they naturally turned their artistic attentions towards depicting such creatures as they killed. Non-edible animals, such as the fox, were probably neglected by pre-historic artists. I have no proof of this, nor do I know at what period the first drawing of a fox saw the light. Accumulated evidence points to the fact that the ancestors of certain mammals had skin protected by a bony or horny armour. Scientists tell us that the fox is one of the creatures

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that retains vestiges of such armour, the structure of its skin indicating the presence of the ancestral form of body covering in the shape of scales like the overlapping slates on a roof. The fox is of truly ancient lineage, and no doubt the cavemen knew all about him, and for all I know may have somewhere left pictures of the animal which now affords us so much entertainment.

To-day we are more concerned with modern delineations of the fox, art having advanced in many ways since the prehistoric limners incised their drawings on the walls of caves or the antlers of deer. From William the Conqueror's time onward we find illuminations depicting hunting scenes, albeit they are woefully lacking in perspective. The thirteenth century also provided bookson venery, illustrated with archaic drawings. It was in the fifteenth century, however, that pictorial records began to make some progress.

Most of these early hunting scenes show various phases of the chase, in which the hunted animal is in view. Some of the finest medieval pictures illustrate that famous book *The Master of Game*, which is the oldest work on the chase in the English language. It was written between the years 1406 and 1413 by Edward III.'s grandson, Edward, second Duke of York. The greater part of the book is not the original work of Edward of York, but is a careful translation of the most famous hunting book of all times, *i.e.* Count Gaston de Foix's *Livre de Chasse*, or, as the Book is often called, "Gaston Phœbus."

One of the beautiful illuminations depicts a foxhunt. It

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shows two mounted followers and three men on foot, with four couples of hounds in full cry. Three of the hounds are white and the remainder whole coloured. In front, running through the trees, is the fox. The latter is crudely drawn, but the whole scene gives a good idea of how the chase was then conducted. There were no quick darts in the open in those days, because the country was thickly afforested.

An engraving after Stradanus, published in 1576, depicts a fox and hare hunting scene. Spears, staves, and hounds are being used by the mounted and unmounted followers. The foxes are crudely drawn, but they can easily be distinguished *as* foxes.

A picture designed by F. Barlow, published in 1671, shows a fox going to ground close in front of hounds. Here again one can tell that the animal is meant to represent a fox.

While such pictures are interesting enough from an historical or collector's point of view, the representations of the foxes shown in them are extremely poor. The fox has been written of again and again as an abnormally clever and cunning animal, and no doubt his "foxy" look has done much to enhance his reputation in this respect. As a matter of fact the fox is no more clever than other beasts of chase, such as the hare and deer. A drawing of a fox, although it be anatomically accurate, can never satisfy the hunting critic unless it also shows the wild, sly look of the true fox, the beast of prey. Not one artist in a hundred can draw a wild fox as it should be drawn.

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The woodcuts illustrating Bewick's *Quadrupeds* and *Fables* give a number of representations of foxes. While these for the most part are not to be mistaken for anything but foxes, they are certainly "nothing to write home about." In the cut illustrating the fable of "The Fox and the Stork," for instance, the fox has an unnatural kink in its brush, and it is trailing the latter on the ground. In the *Quadrupeds* the cuts of "The Greyhound Fox" and "The Cur Fox," depict the foxy look fairly well, but the former again shows the fox trailing his brush. The ears are too small as well. A fox has noticeably large ears.

In the average hunting picture, the fox, if it is shown at all, is made quite subservient to the horses and hounds. It usually looks to be a nondescript kind of creature, and from a hunting critic's point of view, goes far towards spoiling the entire effect of the scene. Should the fox be in the foreground, the chances are that it will draw even stronger disapproval from the critic.

The above may seem a scathing criticism of English and other sporting artists, but I still adhere to my opinion that not one in a hundred is capable of giving us a really life-like picture of a wild fox, especially when the latter is moving. We have a number of English artists who draw horses and hounds well, and can pleasingly depict them in action, yet, with few exceptions, their efforts fail when it comes to a fox.

Closely akin to the work of the artist is that of the taxidermist who mounts our trophies of the chase. A badly

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mounted mask is perhaps a greater eyesore than a badly painted fox picture. The art of taxidermy has advanced tremendously since the days when birds and animals were veritably "stuffed" by workmen who knew nothing of anatomy or the habits of the creatures whose bodies they were asked to preserve. Whilst we have a select, I may say very select, band of artistic taxidermists in England, America is better off, both as regards numbers and the general quality of the work done.

Here again, as with artists, so with taxidermists. The man who can perhaps mount big game heads quite well, utterly fails to do the same with a fox mask. Whilst the perfect taxidermist is yet to be born, certain British and American firms do wonderfully realistic work with both mammals and birds. A taxidermist must be a good naturalist, an anatomist, and an adept modeller, qualities not easily found in one man. A very little thing may spoil the appearance of a fox mask. A head trophy, to give the best effect, should be mounted with a long neck. To make a job of a fox mask the neck skin should be cut round right back at the shoulders, and the taxidermist should be requested not to shorten the neck skin more than is necessarily required to trim the edge. Should the workman disobey orders and shorten the skin, the effect of the mounted mask will, if it is not actually spoilt, be very disappointing.

In the same way with eyes. Taxidermists generally put dog's eyes, with round pupils, in their fox masks. The real artist uses amber-coloured eyes with veins and narrow,

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elliptical pupils, such as a live fox has. You may see a mounted mask with its mouth open, ostensibly meant to be snarling, yet with very little wrinkle, and the eyes practically wide open. When a fox snarls he wrinkles his nose, and half closes his eyes; and the same, to an even greater extent, when he is actually fighting.

While, as already mentioned, the physiognomy of the fox may be responsible for the animal's reputation as a cunning beast, fables have no doubt played their part in enhancing that reputation. Fables are stories such as appealed to the old-time peasantry, and in them are reflected the latter's virtues and failings. Throughout the ages the character of the fox has made an impression on the mind of man. He represents the type who try by wit and cunning to even up the inequality between strength and weakness. In some of the fables the fox is the deceiver, while in others he is deceived. There is much truth in the natural history of the fables. The relationship between the fox and other animals, such as the lion, the wolf, the tiger, the bear, and the monkey, is faithfully dealt with. Do not the fox and the jackal cringe and slink off when the lordly carnivoræ appear, yet creep back to steal the remains of a kill left by the tiger or the lion?

Everyone knows the story of "The Fox and the Grapes." The fox could not reach them, so at last desisted in his efforts and said, "Let who will take them, they are but green and sour." The moral of which is, when a man finds it impossible to obtain the things he longs for, it is a mark of

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sound wisdom and discretion to make a virtue of necessity.

Applicable to hunting is the fable of "The Cat and the Fox." A fox and a cat meet, and the fox boasts of all the tricks he has played to escape hounds. The cat says she has only one artifice. "Come with me," says the fox, "and I will teach you mine." In the meantime the hounds get on their line, and the cat refuses to go any further, exclaiming, "I wish to use my own artifice," on saying which she scrambles up a tree. The fox goes on, but is caught and killed by the hounds. The moral of this seems to be that a man who sets up for more cunning than his neighbours is generally a silly fellow at the bottom.

When hunting jackal in India hounds may get on the line of a wild cat, and there is then a furious burst of music until the cat takes to a tree, and the pack finally settle to the line of their legitimate quarry.

The cuteness of the fox is illustrated in the fable of "The Lion, the Bear, the Monkey, and the Fox." The lion commanded all his subjects to visit his den. When the bear came he was offended with the aroma that issued from the lion's abode, and held his nose in the King of Beasts' presence. The lion grew angry and killed the bear. The monkey, having seen what happened, flattered the lion by saying that he thought the apartments were perfumed with Arabian spices, and exclaimed against the rudeness of the bear, while admiring the lion's paws, which he said were happily formed to correct the insolence of clowns. This

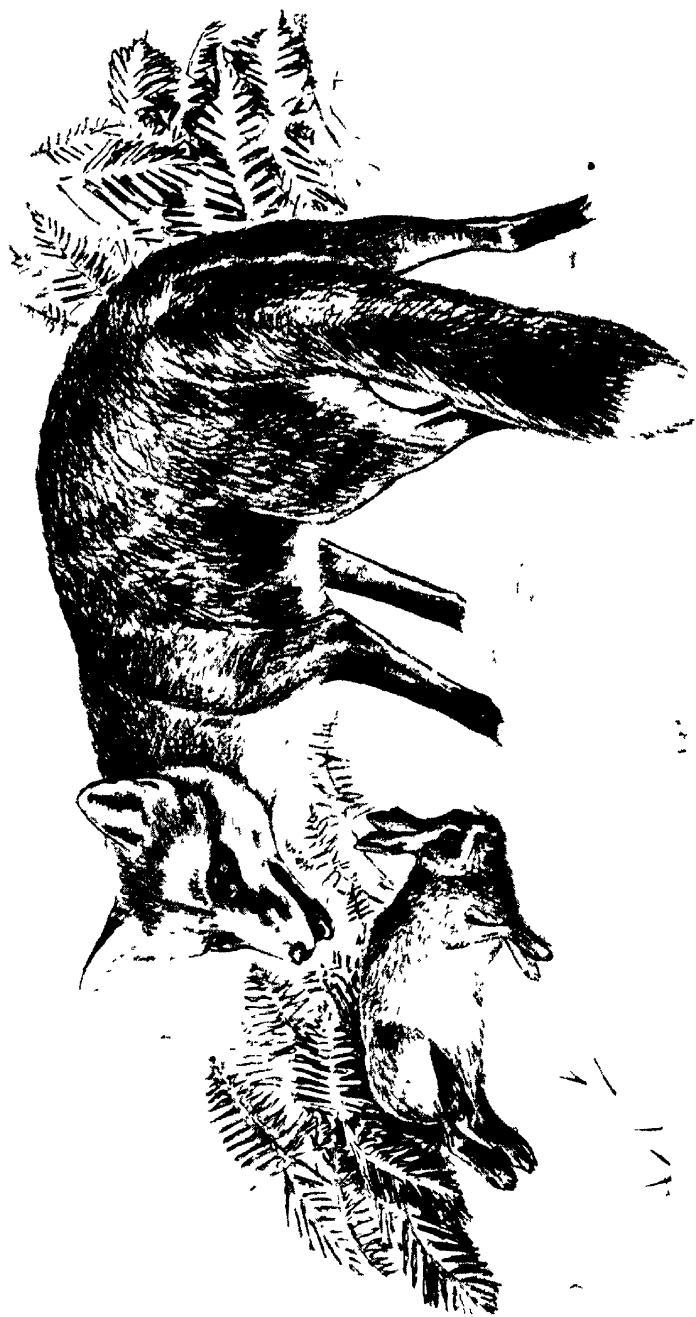
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adulation irritated the lion, so the latter promptly slew the monkey. The lion then looked at the fox. "Well, Reynard," said he, "and what scent do you discover here?" "Great Prince," replied the fox, "my nose was never esteemed my most distinguishing sense, and at present I would not care to give an opinion, as I have unfortunately got a terrible cold."

Moral: it is often more prudent to suppress our sentiments than either to flatter or to rail.

A fable in which the fox is out-witted, is that of the chicken which wished to go out and feed with the cock in the open. "If you do," said the cock, "a fox may get you." However the chicken went, and was caught by the fox. Then the chicken said, "If you let me go I shall grow fat, lay eggs, and bring up chickens, and you will then have far more than if you eat me." The fox agrees, and the chicken rears a hundred chicks. With these she returns, each chick carrying a straw in its mouth. When the fox sees them he asks, "What are these chickens carrying?" "Foxes' tails," replies the hen, and the fox flies in dismay, for, like the legendary devil, he is somewhat easily deceived.

In a previous chapter I have said that a fox carries his brush well clear of the ground, even when hard run. Now there is a fable concerning the fox and the ape, and although many of such fables are true to nature, this one is much less so. The ape begs a portion of the fox's brush, saying, "What is the use of dragging such a mass of hair through the mire?" The fox replies that he would drag a



R. Clapton.
1935

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much longer and heavier brush, rather than lend the ape a bit of it.

The brush of a fox is useful to its owner in many ways, and I have yet to view a hunted fox whose brush is so clogged with mire as to be a hindrance.

In most hunting countries a bob-tailed fox sooner or later appears. There is a fable concerning such a fox that was trapped, but escaped with the loss of his brush. Being ashamed of going about without the latter, he called a meeting of foxes, and made a great talk about the trouble, uselessness, and indecency of foxes wearing brushes. One of the vulpine company then arose and inquired if he gave his advice for the advantage of those who *had* tails, or to palliate the deformity and disgrace of those who had none.

While the fox in fable may fail to beguile his own relations, he often imposes on other animals and reaps the benefit of their labours, as for instance when he occupies a portion of the badger's earth. Both the fox and the wolf bury food, and Reynard digs up the caches of his hereditary foe.

Although a fox can doubtless catch a hare by fair running, he more often overcomes poor puss by stealth. There is the fable of the fox and the hare who were neighbours, and the fox built a house of snow, for it was winter time, while the hare built one of wood. In the spring the fox's house melted, and he then purloined that of the hare by a trick.

Two fables that deal with the art of flattery are those

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of "The Fox and The Crow," and "The Fox and The Cock." A crow flew into a tree carrying a piece of cheese in its beak. The fox sat underneath the tree and complimented the crow upon her good looks, also saying that he had no doubt but what she was an equally good singer. The crow, being tickled to death, opened her beak to sing and dropped the cheese, which the fox promptly purloined.

In the other fable the fox persuades the cock to come down out of the tree to confess, and when it does so the fox seizes it. The cock so flatters the fox, however, that Reynard allows the bird to escape.

All the fables, and there are many, contain some of the earliest observations on natural history, and although a percentage of the latter are incorrect, the majority of them can be confirmed. In all the fables the creatures dealt with have the power of speech. Those to whom such stories made an irresistible appeal believed that the human soul could be transferred to the body of an animal, and that the latter could express its feelings and ideas like a human being.

Setting aside fables, and coming down to hard facts, the fox as a beast of chase is directly responsible for the distribution of a vast amount of money and the employment of a great deal of labour. Thousands of people benefit in one way and another from the sport, the traditions of which have been handed down through generations.'

It takes a lot of money nowadays to run a Hunt in a fashionable country, and when we come to tot up the total

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number of Hunts that depend on the fox to show them sport we begin to realize the huge expense entailed. There are some one hundred and sixteen packs of foxhounds in England, Wales, Ireland, and Scotland, plus thirty-seven in the British possessions.

To hint briefly how the Hunt money goes, provision has to be made for hunting a country. There is the upkeep of kennels, stables, and cottages, and the payment of rates and taxes. Then there are covert rents, plus arrangements for cutting and planting. Wire has to be removed and replaced at the end of the season, fences repaired and earth-stopping attended to. In addition there is compensation for loss of poultry, as well as damage to crops. The wages of the Hunt staff have to be paid, while hay, corn, meal, and flesh all add to the expenditure. A serious item is the horses required to mount the staff, while saddlery, clothing, and incidental expenses bring the total up to a big sum. In addition to the regular Hunt establishments there are the thousands of people who ride to hounds, all of whom have to dip deeply into their pockets in order to enjoy sport. While these people swell the Hunt funds with their subscriptions, they also deal directly with others in the purchase of horses, forage, etc. All this money finds its way by devious channels into the hands of farmers, tradesmen, stable keepers, and those less directly connected with the sport.

Times have changed in the last hundred years, yet hunting still continues with its traditions unimpaired. The coming of the motor car has opened up the country, and

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brought in its train new dwellers in the countryside. Some of these may be rather intolerant of old ideals and customs, while farmers may for obvious reasons be somewhat less pleased to see hounds run over their land than heretofore. A hundred years ago, something of the Feudal System still remained, lineage and acreage then qualifying a man to enjoy sport amongst an exclusive company of followers. Ladies who hunted were few and far between, whereas to-day feminine interest is ever increasing, until we find lady Masters well able to carry on their office, and others who do a great deal towards helping the welfare of the sport. Hunting to-day is more popular than ever before, as well as more democratic. The aristocracy and squirearchy who foregathered at a meet a century ago would be surprised if they could do so to-day, and see the changes in the personnel of the field. The "new rich" are greatly in evidence, self-made people for the most part, for which all credit to them. They have taken enthusiastically to hunting and in these post-war times why should they not do so?

Everything is quicker and easier than it was a hundred years since. Hounds and horses are faster and better conditioned, so that foxes have to cry "capevi" long before they did in the old days of long runs when less pressure was brought to bear upon them. Great points are the exception now, but they are more than made up for by the faster and shorter gallops over sounder going.

The farmers are still the backbone of hunting, for without their good will and sportsmanship there would be no

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land for people to ride over. It is the irony of fate that so many of them are now unable to ride to hounds owing to agricultural depression and taxation, and it is greatly to their credit that although they cannot actually participate in sport as they used to, they yet welcome hounds over their land as heartily as ever.

Was it not the immortal Jorrocks who said that foxhunting was "the image of war without its guilt, and only five and twenty per cent. of its dangers"? An element of risk adds zest to sport, and if, as in foxhunting, there is uncertainty as well, you have a pursuit that is irresistible to its devotees. With a good fox on foot and hounds sending him along, you forget all your cares and worries whilst enjoying the most exciting and health-giving sport in the world.

CHAPTER IX.

THE FOXES

HAVING dealt with the red fox of Europe (*Canis vulpes*), it may prove of interest to glance at other members of the fox family, certain of which are more famed for their commercial value than their sport-showing quality.

The foxes belong to the dog family (*Canidæ*), which includes a large number of animals whose distinguishing points are the formation of the teeth, long and pointed head, large ears, long brush, and straight non-retractile claws. With the exception of the African hunting-dog, all the members of the family have four toes behind and five toes in front. Although associated by naturalists with the dog, foxes are in some respects distinct. There is something very cat-like in the behaviour of a fox, while the pupil of its eyes forms in daylight an ellipse similar to that of the domestic feline.

The North American representatives of the common fox (*C. vulpes*) are local races of that species, and they present much variation in colour. Their range is from Alaska, Hudson Bay, and Labrador to Mexico. The largest of them is the Kadiak Island fox (*C. v. harrimani*) of Alaska. The colour of the North American red fox varies from red to black, and exhibits four more or less distinct phases, *i.e.* red,

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cross, silver, and black. The three last named are melanistic varieties of the common red fox.

In Colorado and the western plains we find the kit fox, a small animal whose body measures about twenty-four inches in length, and the brush some nine inches. Its scientific name is *Canis velox*. It stands on short legs, has a bushy brush, and fairly small thickly-haired ears. Its colour is yellowish-grey, and the soles of its feet are covered with hair, which enables it to run well on ice. Like the red fox it can show a good turn of speed.

Further north in the Asiatic Boreal tract there is the white or Arctic fox (*Canis lagopus*). This fox has short rounded ears, a short muzzle, and whiskers on its cheeks. The soles of its feet are thickly haired, especially in winter. Its summer coat is blue-grey, but it turns white in winter. During the period of intense cold in the Arctic, animals are compelled to hibernate or lay up a store of food. The white fox does the latter, collecting lemmings and sea birds, the bodies of which it hides in crannies of the rocks, or buries beneath a thin covering of earth. Sea birds' eggs are treated in the same way. This fox is the only member of the *Canidæ* family that migrates.

From the United States to Central America we find the Virginian or grey fox (*C. cinereo-argenteus*). It is smaller than the red fox, and appears to be a transitional form between the latter and the fox-like dogs of South America.

There are no true foxes in the last mentioned country, although the members of the dog family which inhabit it



HE STEPS FROM THE COVER

THE FOXES

are fox-like in appearance. One of these is Azara's fox (*C. azarae*), which ranges from Brazil to Patagonia. There is also the crab-eating fox (*C. thous*). These foxes feed on birds, rodents, and crustaceans.

In south-western Asia several species of foxes occur. The European red fox is found within the area, also the desert fox (*Canis leucopus*). The latter, as its name implies, lives almost exclusively in the desert. It is almost the size of the grey fox, and is red in colour, with a white tip to its brush.

The hoary fox (*C. canus*) inhabits Baluchistan and Southern Afghanistan, while a few stragglers are to be found in Europe. Grey above and white below, it is smaller than the desert fox, measuring about thirty-three inches from nose to end of brush.

The Indian fox (*Canis bengalensis*) ranges from the foot of the Himalayas to Cape Comorin. It is a small fox, about twenty inches long, with a brush of fourteen inches. It is reddish-grey above, with white chin and throat, and its brush is tipped with black.

In North Africa there are apparently three varieties of the red fox (*C. vulpes*). These are the Algerian race, similar to the South European *C. v. melanogaster*, the fox of the Atlas Mountains, *C. v. atlanticus*, and the Nile Valley fox, *C. v. aegyptiacus*.

Then there is the fennec (*C. zerda*), a little fox measuring about twenty-two inches over all. It is reddish-fawn above and white below, with a black tip to its brush. Fennecs are more or less sociable, living in burrows together. In

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Ethiopian Africa we find the kama fox or fennec (*C. cama*). It is silver-grey above and yellowish beneath, with a bushy brush. It feeds chiefly on insects and fruit.

Another species is the pale fox (*C. pallidus*) a native of Senegambia, Nubia, and Kordofan. It is smaller in size but has larger ears than the kama fox. Its colour is pale yellow.

A species differing from all other representatives of the African dog family is the large-eared fox (*Otocyon megalotis*). It possesses an unusually large number of cheek-teeth, and is therefore allotted a genus to itself. It resembles a fennec, and has unusually large ears and a bushy brush. It measures about thirty-eight inches over all, and has a black tip to its brush.

APPENDIX

SCOTTISH HILL FOXES

THROUGH the courtesy of Mr. W. Marshall, of the Dell Nurseries, Nethybridge, Inverness-shire, who has done a great deal of very useful natural history work, I am permitted to make use of the following notes on Scottish hill foxes, which he very kindly sent me. The notes deal with foxes found on the Grampians, Inverness-shire, at an elevation of from one to four thousand feet.

Beginning with weights, the average weight of foxes from that district is decidedly higher than in the case of foxes from the fells of Westmorland, Cumberland, and Lancashire. As already mentioned, fifteen pounds is about the average weight for a Fell country dog fox, and thirteen and a half pounds for a vixen. Scottish dog foxes run to about eighteen or nineteen pounds, and vixens fourteen pounds. Measurements of length are apparently much the same for both Lakeland foxes and Grampian foxes. Scottish dog foxes average from forty-eight to fifty inches from nose to the end of brush, and forty-eight inches seems to be an average length for Fell country dog foxes. For both Scottish and Lakeland vixens, forty-four inches is somewhere about the average length. As already mentioned in this book, the difference in over-all length measurement is dependent upon the length of brush.

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The following weights and measurements apply to foxes from the Grampians :

DOG FOXES

April 30, 1927. Weight: 19 lb. Length: 47 in. In fair condition.

April 21, 1928. Weight: 18 lb. Length: 48 in. A good specimen.

March 2, 1929. Weight: 21 lb. Length: $49\frac{1}{2}$ in. This fox was weighed two days after death and was not in prime condition. Had it been fat and weighed warm, it would have tipped the scales at about 24 lb. It had a short brush.

December 10, 1930. Dog fox trapped. Weight: $18\frac{1}{2}$ lb. Length: 49 in. tip-to-tip.

May 26, 1931. Weight: 19 lb. (24 hours after death). Length: $50\frac{1}{2}$ in. Probably two years old. Teeth good, little signs of wear. Just showing summer coat at thighs, winter grey on back. Mr. Marshall says that this is the second-best dog fox he has seen. In condition this fox would have been a really fine specimen.

March 21, 1932. Dog fox trapped. Weight: $11\frac{1}{2}$ lb. Very old by teeth, but had a good coat. Not had much to eat.

VIXENS

April 21, 1928. Weight: 13 lb. Length: 45 in. Nursing cubs.

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May 6, 1930. (1) Weight: 15 lb. Length: 46 in. Suckling seven cubs; (2) Weight: 16 lb. Length: 44 in. Suckling cubs.

April 22, 1931. Weight: $12\frac{1}{2}$ lb. Length: 41 in. Suckling cubs.

As all these vixens were nursing, their January weights may have been from 1 to 3 lb. more.

May 5, 1931. Vixen trapped. Weight: 14 lb. Length: 46 in. tip-to-tip. Suckling cubs, young animal, by teeth one year old.

The following notes concern fox cubs at various ages, and tend to show that growth is fairly rapid.

FOX CUBS

April 21, 1928. (1) Dog cub. Weight: 2 lb. 12 oz.; (2) Dog cub. Weight: 2 lb. 13 oz.

June 25, 1928. (1) Dog cub. Weight: 8 lb. 5 oz.; (2) Dog cub. Weight: 8 lb. 9 oz.; (3) Vixen cub. Weight: 7 lb. 2 oz.

July 21, 1928. Dog cub. Weight: 11 lb. Length: 39 in.

May 6, 1930. Dog cub. Weight: 12 oz. Length: 11 in.

May 20, 1931. Cubs killed and brought out of a moss hole by terriers: (1) Dog. Weight: $5\frac{1}{2}$ lb. Length: 26 in. tip-to-tip; (2) Dog. Weight: $4\frac{3}{4}$ lb. Length: $25\frac{1}{2}$ in. tip-to-tip; (3) Vixen. Weight: 5 lb. Length: 25 in. tip-to-tip; (4) Vixen. Weight: $4\frac{1}{2}$ lb. Length: 25 in. tip-to-tip.

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These cubs were weighed and measured by Mr. Marshall. The cubs were strong and well grown, probably six to seven weeks old. The food found at the den consisted of grouse (hens and cocks), white hares and one grouse egg whole and intact.

May 26, 1931. (1) Dog. Weight: 7 lb. Length: 30 in.; (2) Dog. Weight: 6 lb. Length: 29½ in.; (3) Dog. Weight: 6 lb. Length: 29½ in.; (4) Vixen. Weight: 6 lb. Length: 28½ in.

These were very fine cubs indeed, Mr. Marshall says, as good as he has seen. They were bolted by a terrier and shot. Up to the time of the present observation, Mr. Marshall says that dog cubs appear to preponderate in litters.

With regard to litters of cubs, four seems to be a fair average in the case of Lakeland foxes, but on the Grampians it is higher, working out at about six. The following is a list of litters from the Grampians:

L I T T E R S

April (?), 1922. Vixen killed, carrying nine cubs.

February 24, 1926. Vixen killed, carrying four cubs.

March 4, 1927. Vixen killed, carrying four cubs. Vixen very fat.

March 16, 1928. Vixen killed, carrying seven cubs. Vixen mangy.

April 23, 1929. Vixen killed, carrying seven cubs. Cubs well developed.

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April 20, 1930. Vixen killed. Eight cubs born, about four weeks old.

April 24, 1930. (1) Vixen killed. Eight cubs born, three or four weeks old; (2) Vixen killed. Ten cubs born (small).

April 22, 1931. Vixen killed, carrying two cubs. Might be born first week in May. Vixen old but fat.

March 22, 1932. Vixen shot. Nine cubs in her, size of mice (seven females, two males). Young vixen with small spots of mange. By teeth young.

March 28, 1932. Vixen. Weight: 14 lb. Length: 44½ in. By teeth young. She had cubbed, and by uterus litter was probably six. Four very young rabbits at earth when trap was set, brought by dog fox. This is about earliest record of cubbing Mr. Marshall has.

The above litters are all authentic and vouched for, and give an average of six. With the extremes of ten and two, six to seven seems to be the mean figure.

The period of cubbing on the Grampians is from about March 29th onwards. Mean time, first ten days of April. These dates also more or less apply to cubbing in Lakeland. In exceptional cases cubs are laid down in May.

The following notes refer to Grampian fox cubs.

TEETHING

June 25, 1928. Three cubs killed. These had all their milk teeth intact.

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July 21, 1928. One cub killed. Had the two centre incisors up, both top and bottom jaw. The canines were still the milk set. Foxes appear to teeth much the same as dogs do, from four to six months of age.

BARKING

Actual recorded date: January 19th onward.

NOTES ON SCOTTISH HILL FOXES FOR SPRING, 1936

Through the kindness of Mr. W. Marshall I am again able to give some notes on Scottish hill foxes for the spring of 1936. They are as follows :

Vixen. Weight: $12\frac{3}{4}$ lb. Length: 44 in. A very small fox;
Vixen. Weight: $13\frac{1}{2}$ lb. Length: 42 in. A bigger fox, but thin; Vixen. Weight: 17 lb. Length: 42 in. A fine specimen; Vixen. Weight: 17 lb. Length: $42\frac{1}{2}$ in. A fine specimen; Dog. Weight: 19 lb. Length: 49 in. Had two canine teeth broken, possibly fighting; Dog. Weight: 17 lb. Length: $48\frac{1}{2}$ in. A strong fox, but not in condition.

LITTERS

April 5. Vixen, carrying eight cubs.
April 6. Vixen, carrying eight cubs.
April 9. Vixen, carrying eight cubs.
April 9. Vixen, carrying three cubs; probably a first litter.

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April 20. Cubs born, nine; small, eyes not open, not sexed.

April 20. Cubs born, four; small, two female, two male.

April 23. Cubs born, three; eyes open, one female, two male.

April 25. Cubs born, seven; eyes open, three female, four male, strong cubs.

A dog fox with a bob-tail was shot in March, 1936. The stump was quite short, like that of a cocker spaniel. This is the second bob-tailed fox that Mr. Marshall has seen in a quarter of a century.

In the case of "cubs born," in the previous notes, the figures are not quite so reliable as those given under "vixens carrying." It is seldom possible to dig out the dens, and the terriers have to be relied on for carrying out the cubs. For statistics, pregnant vixens give reliable data. The vixen carrying three cubs was of normal size, and in fair condition, so possibly it was her first litter. Owing to the exceptionally stormy weather, no foxes were secured until March.

ON THE GRAMPIANS

The old type of hill fox, known as *white-footed*, *red-legged*, or *greyhound*, as distinct from the present day *cur* or *black-legged*.

Most old stalkers and keepers are agreed that the above breed of foxes was scarce thirty-five to forty years ago, but

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there is one reliable record as recent as twenty years ago. This man's actual words were, "Yes! I killed one on Ben Vroten about twenty years ago. . . . He was a magnificent beast, not a black hair on legs or ears. I often regretted I did not weigh the old fellow." The old men all said that these foxes were longer of body, stood higher on leg, and were more destructive than the black-legged sort. One old hillman said that they would kill three-year-old black-faced wethers. Another said that they would tackle black-faced hogs. (Yearling sheep, either wether or ewe.)

As far as Mr. Marshall's investigations show, this old Scottish type of fox had no black either on legs or ears. Fifty years ago it was a race pure and uncrossed. The black-legged blood probably came north from Fifeshire on the east coast, or Renfrew and Ayr on the west coast.

That these big foxes killed sheep is undoubted. Two living men assured Mr. Marshall that they knew this to happen. Such killings generally took place in spring, when even a full-grown three-year-old wether would be weaker than at other times of year. A badly wintered ewe hogg would not kill at more than from twenty-five to twenty-eight pounds, and would therefore not prove a difficult prey. Tom Speedy, in *The Natural History of Sport in Scotland*, mentions the killing of cheviots by foxes.

In the old days in Lakeland, a similar type of *greyhound* fox existed, but it is now practically extinct. Some seasons ago I handled a fox killed by a Fell pack, on whose legs and feet there was no black, but the ear-tips were black.

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Mr. Marshall gives the following notes on the food of Grampian foxes:

Food seen at fox dens: white hares and rabbits (frequently); ptarmigan (occasionally); grouse (often); curlew (once); old grouse eggs (once); part of sheep's carcass (once); heads and feet of three deer calves, remains of two deer calves and one roe calf, lambs (not in his experience). On April 20th, 1930, there were remains of about twenty grouse at a den, plus five white hares.

Scottish hill foxes eat most things, but they are particularly fond of rabbits. Other food consists of hares (brown and white), mice, moles, grouse, blackgame, ptarmigan, curlew, lapwing, etc. Carrion in the way of dead red deer, roe or sheep, also the grallochs of deer and rabbits. When a fox starts to eat a dead red deer hind he almost invariably chews off the ears first, then the tail. A lizard was found in the stomach of a fox. Lambs are not often killed by the Grampian foxes, because all the ewes are lambed on low ground far from the dens.

In the case of lamb-killing Lakeland foxes I have known them to bite the tails of the lambs off, just as the Scottish foxes do with deer.

Eagles will eat foxes in Scotland, particularly cubs left lying about a den.

About fifteen years ago (1921) mange broke out amongst the Grampian foxes. Previously it was unknown. Badly affected foxes die, others get very low in condition before they recover. Vixens slightly affected, breed.

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The disease is now passing, but occasional cases are still seen.

The following is a vouched-for incident. A fox was observed to come to a narrow glen each afternoon after rabbits. It was seen to sit near the entrance to a burrow and kill a rabbit as it emerged. It was observed to do this several times.

Another vouched-for incident relates to a vixen leaving a den and deliberately tackling an experienced and plucky terrier. She rolled the terrier over several times, made him yelp, and finally made him bolt for home.

LAMB-KILLING FOXES

Even to-day in some quarters there are those who appear to doubt the fact that foxes kill lambs. If these "doubting Thomases" lived amongst the Lakeland fells they would very soon find reason to change their opinion. In pre-war days I believe somebody in the Midlands made a standing offer of £5 to anyone who could provide proof of a lamb having been killed by a fox. As far as I am aware, the fiver was never claimed. When you see hounds pick up the line of a fox in the lambing field at daybreak, and run it to an earth where there are cubs as well as portions of marked lambs, the evidence that a fox or foxes are the culprits is too strong to be ignored.

While a fox may take lambs at no great distance ~~ffrom~~ from a breeding earth, it will on occasion travel a long way to commit its depredations. I have known one to carry a

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marked lamb for three miles. As a rule lambs are taken as food for cubs, but sometimes a fox will kill them for killing's sake and leave the carcasses lying about. When this happens I imagine it is more often than not the work of a dog fox. While weakly lambs may be taken in preference to strong ones, I don't think that the carcasses of a dead lamb makes any appeal to foxes. In winter foxes will feed on the bodies of dead sheep, but in spring, when all sorts of food is plentiful, I think a fox likes to kill lambs and carry off the carcasses while still warm. At any rate I have seen the bodies of dead lambs lying about for weeks where they have been tossed aside in a district full of foxes, yet they remained untouched.

Some ten or eleven years ago there was a report of sheep-worrying by foxes in the Midlands. Two foxes working in company were seen to cut a ewe out of a flock and pull her down. The presence of the farmer nearby luckily saved her life. In this instance the reward of a fiver previously mentioned could have easily been earned. It is dangerous to make hard and fast statements concerning the habits of wild animals, for they often confute you by doing just the opposite.

In Lakeland, where thousands of Herdwick sheep wander about the fells, the ewes are brought down to the low ground for the lambing season. This does not, however, prevent depredations by foxes. Sometimes a ewe may have an early lamb or lambs far up the fell side, and one or both of her offspring may fall victims to foxes. A ewe, especially

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one of the horned breeds, will fight in determined fashion to defend her lamb, and is quite capable of rolling a fox over, just as she shows no hesitation in standing up to a shepherd's dog.

In some seasons lamb-worrying by foxes occurs more frequently than in others. If the winter has been bad, such as it was in the 1935-1936 season, the Fell hounds cannot take as much toll of the high fell foxes as usual owing to weather conditions, which are often extremely severe at an elevation of two thousand feet and over. The consequence is that more foxes than usual are left, and some of them become unduly bold. Lambs are more inclined to be weakly, too, as there is a dearth of grass for the ewes.

A big hill fox weighing seventeen or eighteen pounds has no difficulty in killing and carrying off a lamb. It is not a case of a careful stalk or a patient wait, as when he is after hares or grouse. His prospective victim is there in the field, and a quick rush soon settles matters provided the ewe doesn't take a hand in the game. Lamb-worrying foxes sometimes vary their menu by taking poultry, unless the latter are shut up over night. Which reminds me of the yarn concerning the fox which was seen by the farmer's wife to enter a hen-house. Having promptly dropped the shutter and made Reynard a prisoner, she informed the menfolk, who went into action with a terrier and a sack. The terrier was pushed into the poultry house and the sack was held over the entrance. After some scuffling and bumping, something shot into the sack, the mouth of which was

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then tied with string. As the men walked off with their supposed captive, one of them chanced to look back, and there was the fox making off. Turning to his mate he exclaimed, "By goy, Bill, we've sacked t'dog." And sure enough they had.

On one occasion a fox that was being hunted by a Fell pack took refuge on a ledge in the face of a dangerous crag. Hounds could not reach him, so a member of the field volunteered to go down on a rope. He was duly lowered and succeeded in shifting Reynard "out of that," and away went hounds in hot pursuit. Away, too, went the field, quite oblivious in the excitement of the moment to the predicament in which they had left their mate, and it was not until his frantic yells reached their ears that some of them returned and set about the business of hauling him up.

As mentioned in an earlier chapter, there are districts in Britain which harbour foxes that are never hunted. In these non-hunting countries, such as the Highlands of Scotland, the foxes are treated as vermin, to be shot, trapped, or worried underground by terriers. Sometimes they are taken alive and sold to a hunting country that requires fresh blood to augment the existing stock. In Lakeland and the Welsh mountains the hill foxes are hunted by a number of foot packs, as riding to hounds is impossible on the fells. In Scotland there is one foot pack that hunts a hill-country in Dumfries-shire.

In many districts of Scotland there used to be a local

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character known as the tod-hunter, *anglice* foxhunter. His assistants in the work of destroying foxes were a motley canine crew, composed of hounds, terriers, and animals of the lurcher type known as "streakers." During the cubbing season the tod-hunter used to visit the earths with his terriers. The latter generally made short work of a litter, after which a watch was kept for the return of the old foxes. At other times of year the foxhunter used to draw the crags and corries, while men were posted at the various passes with guns. I had a letter not long ago from a man who follows the profession of tod-hunter in Scotland. Every year he visits some of the wild mountain country in Ireland, where his bag of foxes runs to a hundred or more.

Sometimes these outlaw foxes are taken alive for transportation elsewhere. One of the most ingenious methods of capture is by means of a stone trap or enclosure, known to the locals as a "kist." When a fox has been tracked in the snow to its den, all the outlets but one are stopped up. In front of this outlet a small stone enclosure is built, roofed with slabs of rock. Just in front of the entrance to the den a wooden or iron slide is fixed. This is attached to a string which passes over a stick placed across the centre of the trap and at such a height that when the string is pulled the slide rises and permits free access to the interior of the trap from the mouth of the earth. When the front end of the trap is built, a narrow slit is left in it of sufficient width to accommodate an ordinary wooden bobbin. To this bobbin the string on the slide-door is made fast, the length of cord

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being such that when it is pulled tight, and the bobbin is lightly jammed in the crevice, the slide is clear of the entrance to the trap.

When everything is quiet the fox leaves the den and finds himself in the walled enclosure. Seeing light through the crack at the far end he at once investigates, and in scratching to get out displaces the bobbin which flies up and allows the slide-door to fall. The fox is then a prisoner until the keeper arrives in the morning with a sack for his removal.

Years ago in Lakeland, organized vermin hunts took place. Little in the shape of fur or feather escaped the attentions of the hunters, the bag including foxes, wild cats, badgers, polecats, martens, eagles, and hawks. In later times money was paid for the heads of foxes, ravens, and other creatures, this money being in some instances disbursed by the churchwardens. At the other extremity of England, *i.e.* in the county of Cornwall, similar fees were paid. In some extracts from the churchwarden's books of the village of Mullion we find that from 1786 to 1850 the sum of £26 13s. 6d. was disbursed on account of 243 foxes, 3 otters, and 1 badger. The last fox paid for was in 1856.

There is a chapter in that sporting classic, *Wild Sports of the Highlands*, by Charles St. John, descriptive of fox-hunting amongst the Scottish mountains. Comparing the sport with hunting in the Midlands, St. John says: "But what are a set of poor fellows like us to do, living here amongst mountains, and ravines, and torrents, and deep

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water-courses, and morasses, against none of which the best horse that ever put foot on turf could contend for five minutes? It took me, I must confess, some time before I could get over all the finer tone of my Leicestershire feelings; and I have no doubt that I blushed a perfect scarlet the first time that I doubled up a fox with a rifle-ball; but now, rendered 'callous by use and necessity, I can do execution upon him without a pang."

A fox which runs the gauntlet of the guns stands a better chance of life than one which joins battle with the terriers underground. A running fox offers a fair mark, but he is proverbially hard to hit. I once, on a cold and snowy winters' day, saw a fox bolted from a big rock earth on the side of a mountain, and he got safely away after six barrels of B.B. shot had been sent after him from the guns of three men who were all good game shots. Cold hands after a long wait in arctic surroundings may have had something to do with the missing, but a fox travelling fast is not quite so easy to hit as you might think.

Following the tracks of foxes in the snow is an interesting experience, and teaches you a great deal about the animal's habits. Hill foxes travel long distances, and you may walk many a mile before you come to the end of the trail. Every move that Reynard has made is clearly marked on the white surface, and you may see where he has sprung upon a jugging grouse, or seized an unsuspecting rabbit. Here he has turned aside to investigate the bare bones of some ancient sheep carcass, and there he has shoved his

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nose into the snow beside a grass tuft, where some field vole had ventured to the surface despite the wintry weather. You will see where he has jumped the big stone walls with the agility of a cat, and, greatly daring, has circled the poultry houses near the farm. Perhaps another line of tracks merges with the one you are following, the smaller footprints denoting it was a vixen. Then a courtship story is told in the snow, for Reynard does his love-making from Christmas onwards, long before the balmy airs of spring arrive, which is the proverbial young man's courting time.

THE END